GAZETTEER OF THE KANGRA DISTRICT—

PARTS { II—KULU AND SARAJ
III—LAHUL.
IV—SPITI.

1917.

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PUNJAB DISTRICT GAZETTEERS.

VOLUME XXX A.

KANGRA DISTRICT,

PARTS { II—Kulu and Saraj
III—Lahul
IV—Spiti

WITH MAPS AND PHOTOGRAPHS.

1917.

COMPILED AND PUBLISHED UNDER THE ORDERS OF THE PUNJAB GOVERNMENT.

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INTRODUCTION.

The Kulu Sub-division of Kángra District is an outlying tract east of Kángra Proper and separated from it by mountains in such a way as to preclude direct communication, with the result that the main road from Kángra to Kulu lies for nearly 50 miles of its length in Mandi State. Kulu is not only remote from Kángra Proper; it is itself of such a vast area that the formation of a separate sub-division was necessary for administrative purposes. It falls naturally into three parts, measuring in all 6,607 square miles, and comprising Kulu and Saráj, Láhul, and Spiti, all three of which are different countries, and contained within definite geographical boundaries: each is described in a separate part of this volume, the administration of the sub-division being for convenience dealt with in the first part (Part II of the Kángra Gazetteer) which treats of Kulu and Saráj. This tract is the most populous of the three sections of the Kulu Sub-division and contains the central offices of the administration: it is flanked on the north by Láhul and on the east by Spiti.

The Gazetteer of 1898 has been completely re-arranged and brought up to date, and much new matter has been added. The Forest notifications have been omitted as they are available in a compact and well-arranged form in the Forest Manual, Volume I. The maps are on the small scale of 8 miles to the inch: for larger detail the 4 miles to inch map should be consulted, which is published in handkerchief form and may be purchased from the office of the Assistant Commissioner, Kulu, where a booklet of information for travellers may also be obtained. Maps on other scales are listed in Appendix III.

The Punjab Government is not responsible for the statements contained in this Gazetteer, but every effort has been made to make it a reliable source of information for the official world as well as for the general public. Special thanks are due to Dr. J. Hutchison of Chamba for assistance rendered by him in regard to the historical and other sections, to Mr. R. E. Cooper for notes on the Flora, and to Rev. H. Kunick of Kyélang for help in regard to Parts III and IV. The photographs are the gift of Mr. J. Coldstream, I.C.S., formerly Assistant Commissioner and Settlement Officer of Kulu.

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PART II.

KULU AND SARAJ.

CHAPTER I.—Descriptive.

SECTION A.

Physical Aspects.

Vernacular name.

The name Kulu has been identified with *Kuluta*, the earliest mention of which is on a coin of the 1st or 2nd century, which has the following legend :—

"Rájña Kólútasya Viráyasasya,"

meaning "(coin) of Viráyasa King of Kulutus," or "King of

Addendum to page 52.—The family of the Rai of Rupi observe the principle of primogeniture with regard to inheritance.

Addendum to page 177.—The Sub-jail at Kulu was abolished in the autumn of 1917.

Position and area.

Kulu and Saráj form a homogeneous tract lying between the North latitudes of 30° 20′ and 32° 26′ and the meridians of 76° 59′ and 77° 50′ East. This position is situated in the large gaps made in the Outer Himalaya by the Beas and Sutlej rivers, and connects the immense glacier-crowned ranges bordering on Spiti and Láhul with the foothills which extend in parallel waves over Mandi State and Kángra. With a length of 80 miles and a breadth which varies from 20 to 40 miles, this country measures 1,912 square miles in area. Its shape is irregular; a projecting triangle on the north-west surmounts a bulge on each side southwards of that feature, and a narrower rectangular tongue extends to the extreme southern limits.

Boundaries.

Boundaries.

The northern boundary lies along the crest of the Mid Himalaya which runs from the apex of the salient in a south-easterly direction. This barrier separates Kulu tahsil from Láhul and has a mean elevation of 18,000 feet, with two passes, the Rotang 13,000 feet and the Hamta 14,000 feet. Beyond it lies the Chenab Valley.

CHAP. I.
Section A.

Boundaries.

On the eastern side, the Mid Himalaya runs southwards at an even greater elevation, separating that part of Kulu which is known as Rúpi, from Spiti. The only pass on this side is a most difficult one, at the head of the Parbati river. On meeting the southern boundary of Spiti, which is an equally high range, continued with diminishing elevation across Saráj as the Sri Kandh, or Jalori ridge, the boundary goes down the Karnádi or Kadrand-Gád, an affluent of the Sutlej, joining the river six miles above Rámpur-Bashahr. East of the Karnádi Gád is Bashahr State.

On the south side of the Saráj tahsil flows the Sutlej, in a south-westerly direction; the opposite bank is occupied by Bashahr State, the Kotgarh tahsil of Simla District, Kumhársen and Shángri States. There are two bridges 25 miles apart at Rámpur and Luhri.

The western boundary is more complicated, but is so clearly defined by natural features that it is never in doubt. From the north a high range runs southwards connecting the Mid Himalaya with the Outer Himalaya or Dháola Dhár. It divides Kulu first from Bara Bangáhal and then from Chota Bangáhal: of these two *taluqas* of Kángra Proper the former contains the headwaters of the Ravi and the latter those of the Ul river. The Ul flows parallel with the Beas in a southerly direction and meets it near Mandi town. The intervening ridge continues with diminishing elevation till the Beas turning west from Lárji cuts through it. The boundary runs along the crest, which has six passes, four leading to the Bangáhals and two to Mandi State. At the Dulchi Pass (6,760 feet) the line turns abruptly east to Bajaura and then goes south along the main stream of the Beas to Lárji. Mandi State is the most important neighbour of Kulu on the west: it extends for 50 miles (taking a straight line) along the boundary, over which cross the two main roads from Kángra, one of them being the only route to Kulu which is open all the year round. From Lárji (3,160 feet) begins Saráj tahsil and the western boundary runs south-east up the Tirthan tributary to where it bends from the east at Manglor: then south up a nullah to the Jalori ridge, 11,000 feet high. This range bisects the Saráj tahsil from east to west as already noticed. From it the boundary goes south veering to south-east, down another nullah to the Sutlej which at this point flows at an elevation of 2,500 feet. The last eight miles of the nullah are flanked by Suket State and a road to Suket starts at the junction with the Sutlej.

THE MOUNTAIN SYSTEM.

The Mountain system.

The mountain system is, like other parts of the Himalaya, composed of long high ridges with sharp crests and steep sides and no wide rolling downs. They are very lofty on the north and

CHAP. I. Section A.

The mountain system.

east sides of the tract and descend to the main streams by spurs, which frequently end in escarped bluffs. At the lower levels the sun is fierce in summer and where the hillsides are much exposed there are few trees, but forests clothe all the higher or more sheltered slopes, particularly those facing north. The main ranges are continuations of the surrounding Himalaya. The northern is a part of the Pir Panjál Range : the eastern is connected with the Kúnzom ridge which divides Láhul from Spiti, while the southern barrier of Spiti is produced across Saráj and into Mandi as the Bashleo-Jalori ridge.

The western or Bara Bangáhal range gives off numerous spurs which divide the main tributaries of the Beás from each other. Those on each side of the Sujoin nullah in Kothi Baragarh are particularly fine ; the southern branch after throwing off a ridge 15,000 feet high ends in an escarpment which stands opposite Naggar at a height of 10,000 feet, while the northern rises to the fine peak of Shegli. A longer spur runs down the left bank of the Sarvari to Sultánpur. The Mid Himalaya on the north puts out a long limb some 30 miles in length from a point east of the Hamta pass : this spur goes south-westwards dividing the Beás from the valleys of the Malána and Párbati and ends in a bluff 8,000 feet high crowned by the temple of Bijli Mahádev at the junction of the Párbati and Beás, opposite Bhuin. Further east, a shorter parallel off-shoot leaves the same high range and divides the Malána from the upper courses of the Párbati. The eastern line of the Mid Himalaya rising in several places to over 21,000 feet forms the watershed of the Párbati, Sainj and Tirthan rivers. One long spur goes westwards between the two former streams and ends sharply at Bhuin with a branch dividing the Hurla from the Sainj : and a shorter ridge descends to the Beás at Lárji between the Sainj and Tirthan rivers. At the junction of the eastern and Jalori ranges the peak of Sri Kandh (17,000 feet gives rise to a branch of the Tirthan, and to the Kurpan river of Outer Saráj. The Sri Kandh or Jalori range has two passes, the Bashleo 10,750 feet and the Jalori 10,000 feet, connecting Inner with Outer Saráj. From it short spurs run down southwards to the Sutlej on either side of the Kurpan and Ani Gáds, and two others to the north, hemming in the Jibhi Gád.

Mountaineering.

The sub-division affords endless scope for the trained mountaineer, and there are in fact very few high peaks which can be said to be at all well known. In 1912 a serious attempt was made by Lieutenant-Colonel the Hon. C. G. Bruce, of the 6th Gurkhas, to explore the chief heights at the northern end of the Beás valley and in Láhul. He has recorded the history of his expedition in a delightfully vivid form in his "Kulu

CHAP. I. Section A. — Mountaineering.

and Láhul" (Edw. Arnold). The volume is full of very striking and beautiful photographs and has a map showing the route taken. Colonel Bruce took with him a Swiss guide, Führer, Captain Todd of his regiment, and some Gurkhas. The Kulu people, he found, have no knowledge of high climbing and have no names for many of their peaks: the Láhulas seem to take more interest in them. Hampered by bad weather and a nasty accident which laid up the leader of the expedition for some weeks, the party managed to ascend a large number of untouched peaks and to explore many others. Ascents were more often made in pairs than in larger numbers, and considering that the Swiss guide and the Gurkha orderly could not converse with each other, it is little short of wonderful that they managed to climb together as much as they did. This pair explored the range on the western and southern sides of the Solang valley and ascended the Solang "Weisshorn" (19,600 feet), "Biaitiére," and "Charmoz," with two Pindri peaks, and also went over a large part of the Deotibba mountain near the Hamta pass, and of the Gephan (Gyéphang) in Láhul. The latter peak was assailed from two sides without full success. The party next went up the Bhága valley to Patseo, and from a base camp there and another in the valley which runs from the Zangskar range southwards to the Bhága near Zingzingbár, they made a series of expeditions up most of the neighbouring heights. Captain Todd had by then joined the party, and with Führer he climbed Maiwa Kundinoo (19,500 feet) and Kundini, west of Patseo, and "Todd's Giant," nearly 20,000 feet on the Zangskar range. Of the ascent of Maiwa Kundinoo, Colonel Bruce writes: "I can think of no climb that has been accomplished in the Himalayas to compare to this in difficulty." He was able to go with the party up the Big and Little Kakti peaks and an unnamed peak of 20,000 feet, also the two "Watershed" peaks on the range which connects with the Báralácha pass, south of Zingzingbár. Colonel Bruce later on crossed over from Naggar to Malána and up the Párbati valley and viewed the peaks near Pulga which seemed most promising: the party had however broken up and no high climbs were attempted in Rúpi. His book should certainly be consulted by anyone who seriously thinks of alpine climbing in the sub-division. The prizes to be gained include the peak "M" between the Solang and Chandra Valleys, the well-known Gephan and Deotibba, with their attendant peaks, and all the high mountains of Rúpi, Spiti, and the central part of Láhul.

THE RIVER SYSTEM.

The river system.

The rivers of Kulu lie in a most beautiful and intricate pattern on the map, like a bunch of ferns, and there are innumer-

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917.

No. 1. Winter at Naggar, Shegli Peak in distance.

CHAP. I.
Section A.

The river system.

able small rivulets which cannot be shown. The main course of the Beas is southwards to Lárji and then west: its larger tributaries are on the east bank, spread out in the shape of a fan based on the length of river between Bhuin and Lárji. On the right or west bank the main affluents are the Solang, Manálsu, Sujoin and Phojal nullahs and the Sarvari. On the east at Bhuin (six miles below Kulu) comes in the Párbati which at its junction is as large as the Beas: the Malána joins the north bank of the Párbati at Jari and the other larger branches of this river are also on its right bank. Its main direction is first north-west and then south-west. Between this basin and that of the Sainj lies the Hurla Gád, a short river rising from a group of glaciers at some distance west of the Spiti border; it joins the Beas opposite Bajaura. The Sainj is a large river flowing due west from Shupa Kuni, a high peak on the Spiti boundary: it has one large branch on the north bank and falls into the Beas at Lárji.

The Tirthan joins the Sainj just above that junction: its course from the southern flank of Shupa Kuni is first south-west, then west and north-west and its main tributary coming from Sri Kandh joins the left bank at Bandal. Another affluent flows northwards from the Jalori pass through Banjár and a third at Manglor along the western boundary of Saráj.

In Outer Saráj the Kurpan flows south-west from Sri Kandh, in a narrow valley, turning south by Nirmand before it reaches the Sutlej. Another stream beyond the Nunu Peak, which stands west of the Kurpan, drains an area of a hundred square miles and has many names and branches. It is known lower down as the Ani Gád, and the principal branch is the Báwa Gád, on the east.

DIVISION INTO WAZIRIS.

Division into Wazíris.

The tract falls naturally into several divisions, which are bounded by geographical features. These have continued from ancient times under the name of Wazírís, and are six in number, five of them falling in the Beas basin and one in that of the Sutlej. Kulu proper consists of three Wazírís: Parol (497 square miles) extends from the Láhul boundary and includes the whole of the Beas valley down to the Phojal nullah on the west and the Párbati on the east with the Malána valley: Lag Sári (93 square miles) extends from the Phojal to the Sarvari: Lag Mahárájah (89 square miles) from the Sarvari to the Bajaura Gád. Wazíri Rúpi with an area of 677 square miles takes in all the country from the watershed between the Malána and Párbati rivers, and the east bank of the Beas, to the north bank of the Sainj river and the Spiti border. South of the Sainj stream is Inner Saráj (299 square miles) up to the Jalori range, and beyond is Outer Saráj (257 square miles).

SCENERY.

CHAP. I.
Section A.

General character of the scenery.

The cultivated portion of Kulu and Saráj amounts to less than 7 per cent. of the whole area. The remainder consists almost entirely of forest and of desolate mountain waste above the limit of tree-growth. The highest villages are not more than 9,000 feet above the sea and the average elevation of the cultivated and inhabited part is about 5,000 feet. The hamlets which are dotted about the mountain slopes are groups of houses standing as close together as the nature of the ground will permit. The houses are generally tower-shaped, three or four storeys high, with wooden verandahs thrown out round the upper storey and crowned by sloping roofs of slate or wooden shingle. Round the villages come terraced fields, planted here and there with walnut and apricot trees, and fringed with belts of evergreen oaks whose leaves are used for winter fodder; mixed up with the fields and separating them from those of the next village, are slopes of steep grass and strips of blue pine and deodar cedar forest. Above the villages, wherever there is some soil and not too much sun, dark forests of fir, lit up here and there with patches of maple or horse chestnut, spread along the upper slopes, and are succeeded again by straggling woods of stunted oak, birch, and mauve rhododendron. Rounded grassy summits or bare ridges of rock crown the whole, and here and there, up a valley, or through an opening in the mountains, a glimpse is caught of the peaks and perpetual snows of the great ranges of which the mountains on which the villages stand, are spurs and offshoots. This is the summer aspect of the country; in the winter the ground is covered with snow for two or three days, or for months together, according to situation. Snow does not usually lie long at heights of less than 6,000 feet, but the aspect has more to do with the time it lies than the elevation.

It is perhaps in the spring that the country shows to its best advantage. Early in March the apricot trees dotted among the fields burst into pink blossom almost before their leaves appear, while at the same time the wild medlars are crowned with white flowers set among fresh green foliage. A little later the sprouting of the leaf buds gives the elms a brownish-purple hue and the alders assume their bright green coats. The higher slopes are soon aglow with the gorgeous crimson of the rhododendron, while the scarlet clusters of the sumach blaze among the fields nearer the river: early in June the horse-chestnuts are masses of blossom, irresistible attractions to millions of humming bees, while the green nuts nipped by the birds or by spring showers are already falling from the walnut trees. In the same interval the fields of wheat and barley rapidly change their hues from green to golden yellow, but before they are ripe for the sickle the brown farrows

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, [illegible]

No. 2. Beas Valley at Naggar Bridge.

of the rice-land, dotted with heaps of manure, are chequered with little patches of velvety green where the young plants are nursed. These are gradually spread all over the gentler slopes near the river, until the monsoon rains of July and August giving new life to the grass and brushwood of the hillsides colour the whole with the same deep shade of green dulled by the masses of white-grey cloud which obscure the mountain tops.. With the autumn return clear blue skies in September; fields and forests alike show wonderful tints of crimson and gold, ripened grain and dying creepers; and by December there is no green thing to be seen but the everlasting pines and cedars in the forests: the fields are bare and the grass on the hillsides is dry and yellow, or black where fire has been set to it. Then the winter casts its pall of snow over the whole except where in the lower valleys the brown leafless alders and elms and withered ferns offer shelter to the woodcock and pheasant until such time as the return of spring enables them to return to their favourite haunts high up on the mountains.

General character of the scenery.

The most attractive spots are in the wilder valleys which are generally to be found out of reach of the ordinary visitor. There are, however, some beautiful parts which can be seen from the main roads, in particular the wooded glens from Ani to Banjár and from Saráhan to Bandal in Saráj, the valley of the Sarvari near Karáon, the Upper Beas above Sultánpur, and the Párbati river viewed from Chung and Pulga. At Bhúin too a fine view up and down the Beas can be enjoyed, and the wild gorges at Lárji impart a certain fascination.

Scenery of the Beas Valley.

The Beas valley has a colouring of its own which is not to be matched in other parts of the Himalaya. To appreciate it fully the traveller should first tour among the bare hillsides of Spiti and Láhul and cross the Rotang pass before the rains are over and while the flowers are still out. The eye revels in the softness and infinite variety of shades in the flower-studded grass, the delicate tints of birch woods, with darker patches of dwarf rhododendron, olive-green oak forests and the rich black of the fir. Fed by a large snow-field on the left, the river tumbles down through alpine pastures and forests in gorges of remarkable depth and many waterfalls. The drop is six thousand feet in nine miles to the junction with the Solang torrent. The woods below Rahla at the foot of the pass contain spruce and silver fir, sycamore and walnut. Below Kothi, which is the first village, the river plunges into a chasm enclosed by sheer cliffs not more than twenty feet apart at the top and races for 3,000 yards through the almost subterranean passage, a hundred feet in depth. Emerging from this gorge it joins the Solang stream which pours in its rough waters, flanked by the wreckage of many floods, and the valley opens out, with a rocky wall of tremendous height on the left,

CHAP. I. Section A.

Scenery of the Beas Valley.

and long wooded slopes on the right, while alders fringe the banks down to Manáli. Looking down the valley the central alluvial slopes are hidden from view, and the hills on either hand are thickly clothed with forest. Below Manáli, whose cedars are the most magnificent in all Kulu, the fall of the river is more gentle, and the lower slopes come into sight, cultivated in shallow terraces which preserve the contours. The Beas here presents a striking contrast to the rushing foaming torrents which pour into it on either hand. The banks are high and steep and hung with bush and creeper: between them the river winds from side to side, now deep and smooth, now fretting over stony places, in channels fringed with alder, and through meadows and marshes dotted with elm and poplar. Here and there wooded islands break the stream into several branches. At Bajaura 40 miles below the romantic chasm at Kothi, the Beas swollen by its numerous feeders has already assumed the dimensions of a great river. Below this village the valley contracts and the mountain sides on either bank slope very steeply down from ridge to river bank. On the Mandi side there are villages and large patches of forest, but on the left bank the eye rests only on sheer grassy ascents almost inaccessible to man or beast, and between Bajaura and Lárji there is but a single village. As Lárji is approached the valley narrows to a gorge through which the waters flow deep and smooth, and then with a sweep round to the right the Beas disappears through a still deeper and more precipitous gorge into Mandi territory.

Scenery of Rúpi.

The scenery of the Párbati and its numerous branches and of the upper courses of the Hurla and Sainj rivers is on an even grander and wilder scale than that of the Beas. The mountains rise steeply from the river beds, through narrow belts of cultivation and magnificent forests to grassy alps and the regions of glaciers and eternal snow. About half the villages are situated on gentle slopes and the remainder on the flat tops of spurs. Much arduous climbing is necessary before the country can be properly seen. The north banks are usually much more precipitous and less clothed with forest than the southern.

Scenery of Saráj.

The deodar forests on the south bank of the Sainj are especially fine, and so are the fir forests of the seldom-visited Rolla reserve in the Upper Tirthan. The Tirthan valley generally has an abundant variety of all kinds of the forest trees found in these parts of the Himalaya, especially near the Jalori Range. From these heights a very extensive view of the northern and eastern snows can be obtained in fine weather. The slopes leading to the Sutlej are well clothed with forest except for a border of a few miles' breadth near the river itself, where the sun is too hot for the young seedlings and the hillsides are clothed with grass.

No. 3. Alder Woods by the Beas below Naggar.

GEOLOGY.

Geology.

A broad central zone of metamorphic, crystalline, and unfossiliferous rocks forms the axis of the Himalayas. The crystallines consist partly of intrusive granite and partly of gneisses, schists, and other metamorphic rocks resulting from the action of the granite on the Cambrian slates and quartzites of the northern zone. These rocks form the major portion of Kulu and Saráj. South of the metamorphics, a system of unfossiliferous sedimentary rocks extends from Chamba through Kángra and the Simla Hill States to Garhwál. They consist chiefly of limestones, slates, quartzites, and conglomerates of unknown age, and have been divided into three systems. They only occur however in a small area in Kulu and Saráj between Bajaura and Plách. Further information regarding the geology of Kulu will be found in the Geological Survey of India, Volume XXXVI, Part I, which also gives the bibliography on the subject.

BOTANY.

Botany.

There is no book devoted to the Kulu flora, but for studying the subject Collet's Flora Simlensis will be found useful. The principal trees and shrubs are described in the section of this Gazetteer on forests. The herbaceous flowers in certain parts display a wonderful wealth of colour as the seasons come and go. In the autumn jonquils (*bodi*) begin and flower well into March if the winter rains are plentiful. Wild roses are sometimes seen and little yellow crocuses. In the early spring the fields here and there are studded with " lilies of the field " (*manduola*) which are shaped like tulips of a satiny white streaked with carmine on the outside and shading inside to a gold centre, with very beautiful symmetrical petals. The primrose-coloured *basanti*, a species of broom, flowers by roads and paths : deep-coloured sweet violets are common in the woods and by the roadsides, as well as dog-violets. Iris makes the dark forests bright with multitudes of waving purple heads, over a ground of light green ; and clumps of purple primulas follow the melting of the snows. Sorrel adds rich reds and yellows to the old grey stone walls of the fields. In summer the upper pastures are all gay with a rainbow-coloured carpet of anemone, ranunculus, wild strawberry, potentilla, wild geranium, and many other flowering plants : balsam in the rains makes pink stretches of colour in the lush meadows. A beautiful clematis is here and there festooned among the trees. Ferns abound in all moist places, and bracken in the pastures above 7,000 feet. In the higher alps are numbers of primulas of various kinds, with edelweiss and blue poppies.

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Botany.

The principal flora of the lower levels up to about 3,500 feet consist (besides forest trees) of Dalbergia Sissoo, Ficus, Phœnix and other trees of the Punjab plains : grasses of the lower scented varieties as well as the tall tufted species : some few terrestrial species of scitamineæ, orchidaceæ, piperaceæ : vines, brambles, small creeper figs : bitter-juiced opuntia, euphorbia, urtica, oleander, pomegranate : some strong-scented labiatæ and scrofulariaceæ with lithophytes, chasmophytes and minute cruciferæ.

In the sub-temperate zone up to 8,500 feet the following herbaceous genera are very fully represented : ranunculaceæ, violaceæ, geraniaceæ, rosaceæ, leguminosæ, rubiaceæ, scrofulariaceæ, labiatæ, urticaceæ, irideæ, cyperaceæ, gramineæ, filices, polygonaceæ, campanulaceæ, umbelliferæ. In the alpine zone the lower levels contain herbs of morina, campanula, polygonum, iris, potentilla, primula and woolly compositæ : above these are found saxifraga, leontopodium, aster, and rosaceæ, tailing off into solitary plants of oxyria and sanosaurca, and finally only thallophytes.

FAUNA.

Fauna.

The basin of the Upper Beas is very favourably situated for sheltering many kinds of wild life which are usually found in temperate climates. Many of the resident fauna are similar to those of England while large numbers of migratory birds are induced to remain in the valley by the presence of abundant food, water and shelter, ringed round by inhospitable ranges of mountains. The Sutlej valley on the other hand contains few migrant ducks or birds of prey owing probably to the much smaller extent of rice cultivation and the presence of a convenient outlet to larger pastures lower down. It is impossible to give in this volume anything like a complete account of the Kulu fauna, and the materials collected by several naturalists are scattered. In Appendix II however there are fairly complete lists of the mammals, birds and fishes with their scientific, English, and vernacular names.

Mammals.

Mammals include bears, black and red, panthers, wild cats, hyænas, jackals, foxes, pine-martens, weasels, otters, wild pig, porcupines, wild sheep and goats, flying squirrels, flying foxes, brown monkeys, grey apes, musk deer, barking deer and goral. The bears are terrible marauders to the peasant, the black bear devouring his maize and the red his sheep. Panthers abound and do great harm among sheep and dogs, and sometimes to cattle and ponies also. Monkeys ravage all fields near cliffs and forests where they shelter, and although good dogs are kept by the villagers they never seem to train them to watch their crops. Gun-licenses are given both permanently (for three years) and

Mammals.

temporarily for the summer crop season, and rewards are frequently earned for destroying bears and panthers, but the guns are often used for killing game of all sorts, regardless of sex, age, or season. The use of snares for trapping hawks and musk deer is permitted under license, but many pheasants and fur-bearing animals are taken in them. The increase of flocks and of mobs of ponies on the alpine pastures is driving away the red bear and there are few ibex and bharal now: thár (*karth*) and goral are however still to be found in some numbers. Porcupines are another great enemy of the crops: and clouds of flying foxes come up the valley every August to devour the fruit for which Kulu is celebrated. Otters attack the trout in the breeding ponds and rivers but are not very destructive. Flying squirrels are often to be seen in the woods and make very charming pets.

Birds.

The birds are both resident and migrant, and include game birds, song birds, birds of prey and a multitude of small species. The small-game shooting is excellent and includes pheasants of almost all Indian kinds, partridges—especially chikor in large numbers—duck, teal, wood-cock, snipe and pigeons. The more common pheasants are the monál, on the higher slopes, the koklás (locally known as *khuákta*), and the kálij (*kalesha*) in the lower thickets. Tragopan and chir are more rarely shot. The snow pheasant (*golind*) and snow partridges also come down in winter. Pigeons—blue-rocks, wood-pigeons and snow-pigeons—abound. The alder groves and running waters of the Beas valley favour large numbers of small birds, some brightly-plumaged, others more sombrely clad. The Himalayan Whistling Thrush and the Greywinged Ouzel make delightful music throughout the valley and the little Pied Robin up to about 5,000 feet. Thrushes appear in the lower valley in the autumn and the black and yellow Grosbeak frequent the spruce and silver fir forests. The large and lesser Fork-Tails may be both seen and heard as they run along the rocks at the edge of the water; the little White-capped Red Start also: Wagtails are plentiful and in the forests can be heard the raucous voice of the Himalayan Nut Cracker as he demolishes the pine cones, while gaudy Minivets in their deep scarlet and black with their plainer yellow wives flit from tree to tree. Among the many lovely species of Fly-catchers is the beautiful Paradise Fly-catcher, which flashes white through the branches or sits with a foot or more of pure white ribbon for tail dangling down below him and his shiny black crest standing erect. Wood-peckers, Tree-creepers, and Nut-Hatches are found in every forest and in the early autumn the beautiful little Wall-Creeper appears in the cliffs. Choughs are common on the higher alpine pastures:

CHAP. I. Section A. Birds.

magpies, kingfishers, cormorants, hoopoes, mynahs, bulbuls, crows, sparrows, cuckoos, night-jars, owls, peewits and a host of other birds come and go, or stay all the year round.

The birds of prey are very numerous and some are valuable to the peasant: but all are treated by him as vermin and killed whenever possible. He has only about three names to cover all these species and is profoundly ignorant of their ways. They have been enumerated by Mr. C. H. Donald, F.Z.S., who has supplied a list of them and other information in Appendix II.

Mammals and birds: Protective measures.

The fauna of Kulu have to be strictly protected against indiscriminate destruction and in 1910 rules were passed under the Forest Act regulating shooting and trapping. Big game was distinguished from small and a close time provided for the latter. Minimum heads were prescribed in the case of big game and a limit fixed for the number that might be shot, while females were protected, except red she-bears. Black bear and leopards were not included. The Divisional Forest Officer was authorised to issue licenses up to eight in number.

In 1912 came the (second) Wild Birds and Animals Protection Act and by notification No. 1390 S., dated 5th September 1916, a scientific list of Birds and Mammals was made out, some being protected all the year round and others for seasons. On the same date notification No. 1392 S. was issued revising the shooting and trapping rules for the Kángra District. The chief features of the new game laws are as follows:—Big game is now more accurately described and a Rs. 20 license covers the whole of the Kulu Sub-division and Bara Bangáhal: licensed *shikáris* must be employed: the minimum limit for heads has been reduced in the case of bharal to 20 inches and increased for thár to 9 inches. Small game is not distinguished, but a general prohibition against trapping is laid down, with the exception of licensed snaring of hawks, and muskdeer, according to settlement rules. The fur-bearing animals are thus protected against commercial exploitation whether they are vermin or not. Rock-pigeons, geese, and ducks are not protected by rules.

Reptiles.

Snakes are fairly plentiful, but the only poisonous variety to be met with at all commonly is the Himalayan Viper and his bite is by no means deadly. The Russell's Viper has been seen in Outer Saráj. The most common snake is a Coluber which is perfectly harmless, and runs to 5 feet and more in length. Lizards, frogs and toads are universal.

Fish.

The Upper Beas river contains only two indigenous species of fish, namely, the mountain barbel (*Oreinus sinuatus*) and a

small catfish (*glyptosternum striatum*), known locally as *gungli* and *mochi*, respectively. Of these the barbel are numerous enough to be of some importance and rights to maintain "*chhips*" or fixed contrivances for catching fish were recorded at settlement. Brown trout first came into Kulu from Kashmír in the spring of 1909, in the shape of "eyed ova." The enterprise has been favoured with the willing and disinterested help of many gentlemen and was chiefly encouraged by Mr. G. C. L. Howell, Assistant Commissioner of Kulu, who in September 1912 became the first Director of Fisheries for the Punjab, handing over to Mr. C. H. Donald, Warden of Fisheries, in November 1915. From small beginnings the culture of trout in Kulu has progressed until the suitability of the Beás for "salmo fario" has been definitely proved, and the trout are now breeding wild in many places. For the last three years, half a lakh of fry have been planted annually in the Beás and its branches, and in 1917 over a lakh of eyed ova will be distributed. In July 1916 the Beás above Sultanpur was opened to angling and the portion below the Akhara bridge to net fishing. The following licenses were issued :-

Fish.

(*a*)	Angling, at Rs. 15 per month	...	2
(*b*)	Netting, at Rs. 2 for the year	...	57

The rod fishing obtained was most encouraging ; trout were found to be plentiful, in excellent condition and good fighters. The food supply in the Beás is well-nigh inexhaustible, being heavily stocked with barbel as well as the water-flea (daphnia), snails, crabs, clams, leeches, and several species of fly, such as the caddis. There are hatcheries and stock-ponds near Naggar in the Cháki nullah and in the Beás at Mahili, just below. The brood fish are kept in the Mahili stock-pond. The fish are stripped from November to February, as they ripen, and the ova after being fertilised are placed in trays in the ova sheds. When eyed, they are sent off to various springs which feed the streams where plants are to be made and a certain number are sent up to the hatching shed at Cháki, for export as fry to places which are inaccessible on account of snow in the winter. Within the next few years it is hoped to stock many others of the Punjab hill-streams with trout from the Kulu hatcheries. For a detailed account of the enterprise reference should be made to an article entitled "The making of a Himalayan Trout water" by Mr. Howell in volume XXIV, No. 2, of the Journal of the Bombay Natural History Society.

Insects.

There has been no complete survey of the Kulu insects, and the following facts are all that can at present be put on record. The water insects have been mentioned in Mr. Howell's article in the Bombay Natural History Society's Journal quoted above.

CHAP. I. Section A.

Insects.

Colonel Farmer of the Civil Veterinary Department notes as follows :—Of the biting flies, *Tabanidæ* and *Stomoxys* attack horses and cattle, and varieties of *Hippobosca* prey on horses and dogs. Ticks are very plentiful throughout Kulu and are due to congregation of flocks on *tháches* or alpine pastures : they cause redwater in cattle and death among lambs by anæmia. The eggs hatch out after the melting of the snows and the nymphs at once attack the flocks which are driven up to the *tháches* about that time. One of the worst flies is the *sarcophagus lineatacollis* which lays maggots in wounds, causing serious losses by the resultant infection. This fly seems to thrive at all altitudes. Other parasitic infections of domestic animals are tapeworm and the leech (*hæmaphaselis leachii*).

Mosquitoes and sandflies are very numerous in the lower levels, and the common house-fly (*musca domestica*) flourishes among the insanitary surroundings of the homes of the people : they also move from place to place with the flocks and herds. There are no white ants (termites) in Kulu, but fish-insects are very destructive.

CLIMATE.

Climate.

The climate of Kulu is as delightful as the scenery, especially in spring and autumn. It is drier than that of Mandi or Kángra and by those who can choose their place of abode no discomfort need be feared, except that tent life in the upper valleys often means a good deal of wet. English fruit can be grown almost everywhere. Outer Saráj has a heavier monsoon than Kulu and the winter rains are nearly everywhere heavy : but in the spring and autumn the dry crisp air is perfect. In the lower reaches of the Beás and in Outer Saráj much heat accumulates in the summer, but is mitigated by the winds that daily blow up all the valleys. The winters are sometimes severe in the higher-lying tracts and in sheltered situations the snow lies well into April, and winter days are very short, even in the comparatively broad valley of the Beás.

The mean temperature has not been re-tested since 1860, but the following are the approximate figures for Sultánpur obtained by allowing three degrees increase per one thousand feet of decrease in elevation from Kyélang, taking the average of 21 years : —

Mean temperatures—

Month	°	Month	°	Month	°	Month	°
January ...	41·9	April ...	58·5	July ...	78·7	October ...	64·3
February ...	41·3	May ...	67·6	August ...	78·7	November ...	57·1
March ...	48·7	June ...	75·6	September ...	73·6	December ...	47·5

Sultánpur is, however, one of the hotter places in the subdivision.

Rainfall.

The rainfall of Kulu and Saráj is in the main less than that of the districts to the south and west, but is often excessive at the higher elevations, on the slopes at the head of the valleys of the Beas and Párbati and along the Jalori ridge, and the spur which it throws out down the centre of Outer Saráj. Owing to the very broken character of the country the fall varies very much locally, and the parts between Sultánpur and Lárji and along the Sutlej are often very dry when the rest of the country has had an abundant fall.

The following table gives the rainfall at medium elevations for each half year since the last Settlement and compares it with the average obtained from a large number of years which is stated separately for each station :—

Station.	Years.	1st October to 31st March.	1st April to 30th September.	Total.
Naggar, 5,780 feet ...	1913-14 ...	31·93	26·52	58·45
	1914-15 ...	18·22	44·13	62·35
	1915-16 ...	12·09	18·29	30·38
	27 years' average .	20·62	29·78	49·40
Kulu, 4,000 feet	1913-14 ...	20·63	14·89	35·52
	1914-15 ...	19·40	31·34	50·74
	1915-16 ...	8·72	22·13	30·85
	42 years' average ..	15·87	23·87	39·74
Banjar, 5,000 feet ...	1913-14 ...	13·65	45·56	59·21
	1914-15 ...	14·42	36·23	50·65
	1915-16 ...	6·71	36·09	42·8
	40 years' average...	11·23	29·06	40·29

CHAP. I. Section A.

The earthquake of 1905.

THE EARTHQUAKE OF 1905.

On April 4th, 1905, shortly after 6 A.M., occurred the disastrous earthquake which destroyed Dharmsála and many villages and towns in Kángra and Kulu. The centre of the disturbance in Kulu was at Lárji and the neighbouring *kothis* suffered much more heavily than any others. The loss of human life in Kulu nowhere reached the same proportion as in Kángra, a fact which was due to the better style of house-building prevalent in the sub division. The earthquake came with a preliminary tremor followed by three distinct shocks and the timber-bonding in the houses held them together long enough, in most cases, for the inmates to escape. This is proved more particularly by the fact that the greatest loss of life was experienced in Sultánpur where the buildings were nearly all built of masonry without any timber-bonding. The loss of cattle was in a greater ratio to that of human life in Kulu than in Kángra, because the cattle are housed in the lower storeys and had little chance of escape. The figures of mortality are given below:—

	Persons.	Plough cattle.	Other animals.
Kulu	827	2,952	7,640
Saráj ...	288	1,649	4,551
Láhul	12	255	11
Spiti	0	62	72
Total ...	1,127	4,918	12,274
Rest of Kángra district	18,920	8,412	27,527

In Kulu there were 17,058 houses entirely destroyed, and 16,208 others returned as repairable. No Europeans were killed, and the Láhul Mission was hardly damaged.

The tahsil, thána, jail and rest-house (Calvert Lodge) at Kulu were totally wrecked, but fortunately the hospital only suffered slightly: one-eighth of the houses in the city were demolished. The Kulu type of architecture was not then in vogue in Sultánpur but at Banjár the newer tahsil, treasury, thána and hospital were all timber-bonded and escaped with little injury. Many rest-houses were badly damaged. The castle at Naggar stood the shock well, having much wood in its construction, though it had come very near to being condemned. The *patwárkhánas* had been allowed to go out of repair and most of them suffered severely, 17 requiring re-construction.

Amongst the immediate effects of the earthquake was the complete interruption of communications by telegraph, post, and roads; nearly every public road was blocked by landslips, village paths were destroyed, and the people, panic-stricken by their terrible losses, could be neither induced nor coerced into conveying letters: the wildest rumours were current and accurate information was unobtainable. The Assistant Commissioner Mr. H. Calvert was at Zakátkhána in Outer Saráj and the Assistant Engineer was absent in Simla. Mr. Calvert had great difficulty in reaching Kulu owing to the severity of the previous winter. The Bashleo Pass was tried and found to be snowed up and finally the Jalori Pass had to be crossed over ten feet of snow. Mr. Calvert reached Banjár on April 17th and Sultánpur on the 21st. The journey was full of incident, he wrote, the roads were badly damaged—a heavy landslip near Lárji had completely obliterated the Burva bridge and dammed the river, thus forming a lake about half a mile in length and submerging a quarter of a mile of the roadway. Similarly a series of lakes formed in the Sainj valley. Some of the landslips kept moving for several days and were a source of great danger to travellers.

In Kulu the principal work done before Mr. Calvert arrived was by Colonel Rennick at Bajaura and by M. Amar Singh, Tahsíldár at Sultánpur. One of the first measures taken was the prompt distribution of free food in Sultánpur: the pre-existing stocks of grain had been mostly buried under the ruins of the houses and there was a great scarcity of the ordinary necessaries of life. Lists of the injured were made out and their needs were attended to by the Assistant Surgeon. Gangs of coolies were formed and set to work at clearing the bazars.

Medical help arrived from outside from the 24th April onwards and hospital parties were sent out in all directions, under the orders of Major Ker, I.M S. The Bhúin bridge having been destroyed and the Borsu-Jari road blocked by landslips, the hospital staff who went to Rúpi had to cross the Beás on skins. It was found that very extensive damage had occurred in Bhalán and Selınsar *Kothis* and Mr. Calvert after visiting the tract in May reported that numbers of village sites had been destroyed and that many persons had lost nearly all their animals. The forest road from Lárji to Sainja was broken. The medical staffs under different officers performed many arduous journeys on foot over high passes and through constant danger from falling boulders.

Mr. Waterfield, Assistant Commissioner, came in May, and also Mr. Donald, the Assistant Engineer. The former superintended (among other duties) the re-construction of *kúhls* which had been broken. The principle observed was a very sound one, namely that serious damage from landslips should be put right

CHAP. I. Section A.

The earthquake of 1905.

at Government expense, while all petty damage should be attended to by the right-holders. For some *kúhls* aid was confined to giving free gunpowder for blowing up large rocks. In all cases the right-holders worked on their own *kúhls*, with the result that the channels were put into repair with a minimum of expense and delay.

Besides providing medical relief, and tents for officials, Government sanctioned *takkávi* loans liberally and Rs. 30,000 for buildings and Rs. 20,000 for cattle were given out. The people were most suspicious at first of *takkávi* and are still most unwilling to take it, but eventually it was received readily, the terms as to interest and instalments being most easy.

Forest timber was given out freely to right-holders and non-right-holders alike, over 62,000 trees being provided free of cost. Rs. 20,000 of the relief fund was devoted to sawing timber for a depôt at Sultánpur established by the Assistant Commissioner.

The relief fund for Kulu amounted to Rs 60,000 and was most beneficial to those who had little private means.

The work of reconstruction in all its branches was much retarded by the scarcity of labour. Every sufferer required labour and nearly every labourer was himself a sufferer. The poorer people managed with the mutual assistance of their friends and the more wealthy competed for whatever labour offered itself. The distribution of the relief fund helped to diminish the supply of labour, by providing a little ready money for those who otherwise would have been compelled to work for it. It was not until the opium had been collected, the rice planted, and shelters put up against the rains that any large amount of labour was forthcoming. The Pioneers who were expected were unable to get further than Pálampur owing to the lack of supplies, but a company of Sappers and Miners under Captain Charteris spent some months in the valley and reconstructed the Bhúin bridge. This was a large suspension bridge presented by Mr. Duff, Forest Officer, and it was completely ruined: the cables lay for months in the sand of the river-bed and local attempts to raise them were unsuccessful. The Sappers however succeeded and the present fine bridge is entirely their work.

Remission of land revenue was allowed in places where it was necessary and amounted to Rs. 38,344 including Rs. 4,525 *jágír* revenue. Income-tax was also remitted and some excise fees.

The earthquake in Láhul and Spiti.

In Láhul the loss of life was small though the damage to houses was considerable. The most remarkable effect of the earthquake here was the almost complete darkness caused by enormous snow-slides filling the air with fine particles of frozen

The earthquake in Láhul and Spiti.

snow. The whole of Láhul was under snow at the time and the distress at first was acute. The Thákur was given an advance of money with directions as to its expenditure and he distributed free food and other assistance. Trees for rebuilding were also given out by the Thákur.

In Spiti the earthquake was general but not severe: the houses, built of mud with twig roofs, suffered considerably and many valuable yáks were destroyed. No human lives were lost.

Special conditions in Kulu.

Mr. Calvert concluded his report with an account of the special conditions prevailing in Kulu which added so much to the effects of the earthquake: "I can imagine," he writes, "few things more terrifying than the sight of the mountains rolling down upon the people below: at Zakátkhána I had a sufficiently nerve-shaking experience of great boulders falling down from directly above, and killing people near by, but this was nothing compared to the experience of those who, like the Negi of Bhalán, rushed outside just in time to see their wives, children and houses hurled many yards down a precipitous hillside. Landslips almost everywhere and avalanches in the higher villages wrought terrible destruction. Clean tracks were swept through magnificent forests, enormous rocks ground houses to powder, and caves collapsed upon their occupants. The extremely mountainous nature of the country greatly hindered relief operations: the interruption of communications added to our difficulties, and the large area involved caused a lot of our time to be occupied in travelling on foot. The arrival of assistance from outside was delayed by the isolation of Kulu."

Since this report was written on July 26th, 1905, much has been done to repair the havoc of the great earthquake, but there are scars on the hillsides in many places, and accumulations of débris in the torrent beds which will not disappear for many years. Nor has the memory yet faded of the devoted work done by the local officials and others without aid from outside for many days, and of the equally disinterested energy of those who eventually made their way into Kulu and helped to restore the injured, and to rebuild the ruined villages.

FLOODS.

Floods.

Floods frequently occur in the narrow steep valleys and glens, but the damage they cause is usually local. The most destructive was in the Phojal nullah in 1894, when the narrow gorge was blocked with rocks and ice brought down by a succession of avalanches at the head of the valley. Another occurred in 1900 in the Bajaura Khad and swept away several buildings.

SECTION B.

HISTORY.

CHAP. I. Section B.

Ancient names.

As described in the opening paragraphs of this Chapter, the old name of Kulu was Kulúta: this word is known in Sanskrit literature and has also been found on a coin which probably dates from the first century A. D. Sanskrit authors also speak of Kunindas or Kulindas, a people living to the east of the Trigartas, who inhabited Kángra. These two words may perhaps be connected with "Kanet" which is the name of the principal tribe of Kulu. The people of Kulu are to this day called Kole (singular Kola),* a word which must not be confounded with Koli, which is the name of a low-caste tribe of Kulu, probably aboriginal.

The history of Kulu, as at present known, is that of a very ancient state, dating probably from the dawn of the Christian era, preceded by a period of rule by barons, who were either independent or under the nominal authority of a larger power at present unknown. The legends go still further back to the time of the Pándavas.

Legendary history.

The first mythical hero is one Tandi—also called a demon—who settled to the south of the Rotang Pass, with his sister Harimba. Bhím Sen, one of the Pándava brothers, came to Kulu to exterminate the demons (? aborigines) who then held the country, and after doing so he ran off with Harimba. Tandi pursued them and was killed. Harimba is the same as the Devi Hirmán, who is believed to have populated the Kulu valley. Bhím Sen had a follower named Badár (the Vidára of the Mahábhárata) who married a daughter of Tandi. Their sons were Bhot and Makar, who were brought up by the sage Biás Rikhi.

Foundation of Makarsa.

When Bhot grew up he married a Tibetan woman, named Sudangi, and Makar, who seems to have been a Hindu, separated from them because they ate cow's flesh, and founded a town on the left bank of the Beas which he named after himself Makarsa. It stood near Hurla village, on the north side of the Hurla nullah and there its ruins may still be seen. The name is also written as Makráhar, Makráha and Makarása, and down to recent times was applied to the whole of Kulu. Makar's descendants are said to have ruled there for a time, but the dynasty ultimately died out and the town was deserted. Probably the power of this line of princes, if they ever existed, was no more extended than that of the petty barons, who were in the early period the real rulers of the country. The town of Makarsa was, however, rebuilt by a later King and made the capital of Kulu in the 16th century.

*The adjective of *Kulu* would originally have been *Káuluá*, which was later corrupted into *Kolua*, and then *Kola*.

CHAP. I. Section B.

Viráyasa.

The first Rája mentioned in historical record is one Viráyasa, whose name figures on a coin of the first century A. D. as Viráyasa, King of Kuluta. Beyond this fact nothing is known of him, and there is no account of him in the *vansávali* or genealogical list of the kings of Kulu.

The Kulu chronicle.

This document is evidently based on an authentic *vansávali* and may be accepted as fairly reliable. It tells how the Rájás of Kulu fought with the local Ránás and Thákurs right on into the sixteenth century. The state was also continually beset by outside enemies and the dynasty was more than once submerged for years together. But the boundaries of the state spread until they reached Bashahr, the Simla Hill States, Mandi, Suket, and even Láhul and Spiti.

There was first a line of kings whose surname was Pál, extending to 1500 A. D., and they were succeeded by kings called Singh, who connected themselves directly by descent from the Pál Rájás. These two dynasties were in all probability one and the same line. The traditions and legends are very similar in the case of the first Pál Rája and of the first Singh. Both are said to have come from Mayapúri or Hardwár on the Ganges, the inference being that they were from the same family: and this traditional origin they have in common with three other branches of the same family, all of them bearing the common suffix of Pál, namely, Basohli and Bhadu on the Ravi and Bhadrawáh on the Chenab. That this tradition should have survived in all these families throughout so long a period is remarkable. In the *vansávali* there is no suggestion that Sidh Singh (who began his reign as Sidh Pál) came of a different line: on the contrary, it seems to be assumed that he was descended from the Pál family of Rájás. The change from Pál to Singh was merely a fashion of the time and is of no consequence.

The capitals.

The original capital of the state was at Jagatsukh, the ancient name of which was Nast. There the early Rájás ruled for 12 generations till in the reign of Visudh Pál the capital was transferred to Nagar, and in that of Jagat Singh (1660) to Sultánpur.

Behangámani Pál.

The founder of the dynasty was driven out of Hardwár by neighbouring chiefs, and one of the cadets of the family, named Behangámani, found his way to Kulu. He attacked and overcame some of the petty chiefs of the Párbati valley, but this was only a temporary success and he next appears as a fugitive at Jagat Sukh, living in concealment. He was discovered however by a Brahman who read the signs of royalty in his face, and on the way to fair he befriended an old woman who turned out to be the goddess Harimba. The result was that the people spon-

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Behangámani Pál.

taneously accepted him as a Rája, and he formed a kingdom after killing many of the Ránás and Thákurs. This legend follows the lines on which most of other hill states were founded, and there can be little doubt that the Kulu dynasty started with the successful forays of an adventurer from the plains, who came probably with a body of followers and established himself in the Upper Beas valley, after subduing the local petty chiefs. Those who submitted were made to pay tribute and this tributary relationship was probably the common condition of things all over the hills for many centuries. Their subjection was in the first instance only nominal and the tribute was only forthcoming when there was no other alternative.

Pachh Pál, son of Behangámani Pál, conquered the Ránás of Gojra and Berála (near Manáli) and the ninth of the line absorbed Barsai, on the death of the Rána of Gaján. It was probably in the reigns of Visudh Pál and Uttam Pál (eleventh and twelfth in the line) that Nagar was finally conquered and annexed.

The Tibetans.

One Piti Thákur was killed in the fighting about this time, and his death seems to have been an incident in the continual struggle that went on between the Kulu people and Tibetans. From an early period the Tibetans were in the habit of making invasions into Kulu and their leaders seized territory to the south of the high passes, but being unable to live at lower altitude than 7,000 or 8,000 feet, they never advanced into the main valley. Each of these Tibetan leaders was called Piti Thákur by the Kulu people. They were still in possession as late as the reign of Sidh Singh, A. D. 1500, by whom they were finally driven out. In the time of the early Pál Rájás, Spiti was ruled by Hindu kings and in Rudar Pál's reign (the 18th of the line) Rájendar Sen of Spiti invaded Kulu and subdued it, and a tribute of 6 annas in the rupee of land revenue seems to have been paid during the reigns of Rudar Pál and his successor. Parsidh Pál (20th Rája) delivered his country from this subjection by defeating Chet Sen, Rája of Spiti, in battle near the Rotang Pass. It was probably about 600 A. D. that a Tibetan Chief from Gyamurror in Ladák overthrew the Hindu Rája of Spiti and established Tibetan rule there: the chronicle records that he gave three Spiti villages to Sansár Pál (24th Rája of Kulu) for assisting him.

Visit of Hiuen Tsiang.

In 635 A. D. the Chinese traveller Hiuen Tsiang visited a country called "Kiu-lu-to," which is his rendering of "Kuluta": he says it was situated 700 *li* (117 miles) to the north-east of Jálandhar, and measured 3,000 *li*, or about 500 miles, in circumference. The description shows that Kulu probably included all the territory now in Mandi and Suket, and this is supported by local tradition in those countries as well as in Kulu.

Struggle with Chamba.

In the reign of Sridattesvar Pál, the 31st Rája, the Chamba State, whose capital was then at Brahmaur, was expanding eastwards, and a force crossed the Rotang Pass under "Amar" who was perhaps Meru Varman, Rája of Chamba, who flourished about A. D. 700.

The Kulu Rája and his son and one grandson were killed and the other grandson Sital Pál fled to Bashahr where the family seems to have remained for some time, as Sital Pál and five of his descendants never reigned and probably were all the time at the Bashahr court. Meantime Kulu was under the rule of Chamba, until Sri Jaresvar Pál about 780 A. D., with the help of Bashahr and assisted by the distraction caused by a Tibetan invasion of Chamba, re-established the dynasty.

Narad Pál had a war for "12 years" (meaning a long period) with Chamba, whose forces advanced to Madan Kot near Manáli. This war is still recalled in local tradition : the Gaddi army (as the Chamba force is correctly called) besieged the Rána of Manáli in the Lower fort on the "Gaddi Padhar" (or plain) for three months. Eventually the Kulu people got rid of these invaders by treachery, luring them across the Kothi gorge, after a peace had been patched up, by inviting them to a social gathering, and taking away the bridge in the darkness. A similar story is told of the fate of a Mandi force in Kothi Mángarh in the reign of Rája Mán Singh in the 18th century.

Conquest by Suket.

The external pressure on Kulu continued, and the 43rd Rája Bhúp Pál (about 900 A. D.) was conquered by Suket and made to pay tribute.* His son continued to pay, and when the next Rája, Hast Pál, in conspiracy with the brother of the Rája of Suket, rebelled, he was killed in battle at Jiuri on the Sutlej, and Suket invaded Kulu and took possession of the country, allotting only small *jágir* to Hast Pál's son. There was then an interregnum for three generations, until a minority occurred in the Suket line and Surat Pál of Kulu assumed independence.

Tibetan invasion.

Conquests of portions of Ladák and Báltistán recorded in the next three reigns are not corroborated, but in the reign of Sikandar Pál the Rájás of Lhása Gyamurror, and Báltistán are said to have invaded Kulu and held the country for some time. This Tibetan invasion probably occurred in the time of Lhachen Utpala, about 1125-50 A. D., when the Kulu Rája bound himself by oath to pay tribute "till the glaciers of Kailas should melt away or the Mansarowar lake should dry up." This treaty remained in force till the reign of Sengge Namgyal in 1590-1620.

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*Connection with Chamba was however still kept up, as about 930 A. D. the Rája of Kulúta assisted the Rájás of Trigarta (Kángra) and Chamba to repel from Chamba an invasion of Dogras from Jammu and their Saumatika allies (from Basohli ?). The theory is extremely probable that on this occasion the Kulu branch of the Hardwár family came into conflict with the later off-shoots which went to Basohli (Balor).

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Tibetan invasion.

Sikandar Pál, however, went to Delhi to complain of the Chinese who had invaded his territory and the King of Delhi came in person with an army, passed through Kulu, and conquered the Tibetans as far as the Mansarowar lake, restoring the Kulu Rája to his dominions.

The Rája of Bashahr was the next invader and in the reigns of Hast Pál II and Sasi Pál exacted tribute : but he was driven out by Gambhír Pál who extended the kingdom to the right bank of the Sutlej.

Narendar Pál (60th Rája) was conquered by Bangáhal and Kulu remained subject to that state for ten years. The tribute was continued until the reign of Indar Pál, the 64th Rája.

Invasion by Suket.

A more serious affair was the war with Suket. In Keral Pál's time (67th Rája) the Rája of Suket, Madan Sen, after a severe struggle conquered Kulu as far as Siunsa, north of Katrain. He also built a fort in Khokhan Kothi, which he named Madanpur.

Bhosal Rána.

There was a chief called Bhosal Rána who married a Suket princess and made his peace with Madan Sen. This Rána is well-known in Kulu tradition and the ruins of his palaces (*bera*) can still be seen at Hát (Bajaura) and at Garh Dhek, near Baragráon. He held the huge dressed-stone fort of Baragarh and a city called Sangor at Baragráon. He is known as a foolish chief who was completely in the hands of his ministers with the result that a poor man who only had 12 pumpkins found himself confronted by 18 tax-gatherers and could not pay them all. The proverb runs—

Bára pethe, athára dáni,
Bhosal Rána sár na jáne :
" Twelve pumpkins, eighteen tax-gatherers ;
Bhosal Rána knows nothing of government."

His Wazír compassed the death of the Suketi Ráni by persuading Bhosal to sacrifice her to make a new *kúhl* successful. The Rája of Suket thereupon descended on Bhosal Rána and deposed him and tortured the Wazír to death. Suket then assumed direct rule over Baragarh, until it was wrested from that State by Sidh Singh after 1500 A. D.

The Lag Kingdom.

The origin of the Lag Kingdom is traced to a *sásan*, or religious grant of Wazíri Lag Sári to the family of a *parohit* of a Rája of Suket, in expiation of a false accusation, under stress of which the *parohit* had committed suicide. This grant was made by Parbat Sen (13th in succession from Madan Sen), as the Suket records shew, though Harcourt attributes it to Madan Sen. The descendants of the original grantees subsequently became inde-

pendent of Suket and added considerably to their possessions, particularly during the interregnum after Kelás Pál. They succeeded in forming a separate Kingdom of Lag, which included territory from Raisan to Raghupur and from Sultánpur to Swár. They remained independent till conquered by Rája Jagat Singh of Kulu.

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The Lag Kingdom.

The 72nd Rája, Udhran Pál, is noticeable for the fact that he is the first of the line whose date, 1418—28, has been ascertained. The information comes from two inscriptions, on the mask of Hirma Devi at Dhungri and on the Sandhya temple at Jagatsukh.

Udhran Pál.

Kelás Pál, the successor of Udhran Pál, who probably ruled till A. D. 1450, was the last of the Pál dynasty and after him there was a long break of about half a century. It is permissible to conjecture that Kelás Pál was driven out by a combined revolt on the part of the Ránás and Thakurs, and that he retired to Hardwár to await a favourable opportunity for returning to his dominions, which did not occur till the time of his third or fourth descendant, Sidh Singh, who became the 74th Rája in the Kulu line.

Kelás Pál and the interregnum.

Sidh Singh's date is fixed at 1500 A.D. by an inscription on the mask of Vishnu at Sajla in Kothi Barsai. He too, like Behangámani Pál, was recognised by a Brahman, went to Jagatsukh, and assisted an old woman who turned out to be the goddess Harimba, and was eventually made Rája of Parol by the people themselves. It seems quite possible that after a long exile the head of the family did actually return from the outer hills and was acclaimed as Rája by the people as a means of relief from the tyranny and oppression of the petty chiefs. He had a hard struggle against them and adopted the method of "divide et impera."

Sidh Singh.

One Jhina Rána was a powerful chief who held both banks of the Beás above Manáli: his name still survives in tradition and his ancestors seem to have been in possession from a remote period. This chief was treacherously slain by a Dági named Muchiáni who was bribed by Sidh Singh. The Baragarh fort was also captured probably in his reign and the stones taken to build Naggar. The Thákurs of Rúpi were won over from Suket* whose rule was unpopular. Thus the greater part of Parol and Rúpi was quietly annexed.

Conquest of the Ránás and Thákurs.

Sidh Singh next turned his attention to the Tibetans who had formed permanent settlements at the head of all the side ravines leading down to the main valleys, and flanking the ancient trade route from Ladak and Tibet to Rámpur-Bashahr.

Tibetans finally driven out.

*In the Mandi record this transfer of allegiance by the Thákurs of Rúpi is said to have taken place in Bahádur Singh's reign

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Tibetans finally driven out.

There can be no doubt that this traffic went by the upper Chandra valley as far as Puti Rúni, thence to the Tos Nal and Pulga, the head of the Hurla nullah, the upper Sainj, Tirthan and Kurpan rivers to Rámpur, and was in use in the time of Sidh Singh: also that Tibetan officers held control of the country through which it passed. Their hold must have been strengthened by a successful invasion of Kulu from Ladák about 1530 A. D. during the reign of Tsewang Namgyal, but it was probably soon after this attack that the Tibetan officers or petty chiefs were driven out of Kulu by Sidh Singh and we hear no more of them. Sidh Singh died probably in 1532 A. D. and was succeeded by his son Bahádur Singh.

Bahádur Singh.

The whole of Rúpi had apparently not been absorbed by Sidh Singh, and Bahádur Singh extended his dominion over Harkandhi, Kanáwar, and Chung. He next attacked Kotkandhi and the Rána of Chhainwar came and tendered his submission, receiving a *jágír*. The Thákur of Tandi was killed and his fort at Dharmpur destroyed. Thákur Haul of Sainsar was also killed and lands given to his relatives who assisted in his defeat.

Second foundation of Makarsa.

Bahádur Singh then settled at Makarsa (Makráha) in Kotkandhi Kothi which, as already described, had originally been built by Makar, the son of Vidar. There he built a palace for himself and repeopled the town, the name of which came to be applied to the whole kingdom including Naggar which was the capital. Bahádur Singh died at Makarsa and his immediate successors continued to live there down to the time of Jagat Singh, who transferred the capital to Sultánpur. The Tibetan chronicles continued to call Kulu "Makarsa" till the reign of Pritam Singh, when Sultánpur is first mentioned, and the name Makarsa is used in the Chamba records down to 1808. It is certain, however, that Naggar was the seat of government till its transfer to Sultánpur. Bahádur Singh no doubt found Makarsa a convenient place of residence during the time that his generals were campaigning in Saráj. He never took the field himself, apparently, and as long as the right bank of the Sainj was held by his troops he would be quite safe at Makarsa and in touch at once with Naggar and with the army in the field. Most unfortunately, many of the beautiful stone carvings of Makarsa were used to build the bridge over the Beás at Dilásni, which was afterwards washed away, as well as that over the Hurla nullah. But enough remains to show that the place was founded by some civilized dynasty which had attained to a very high order of art, for the stonework is very beautiful. It seems probable that one highly advanced civilization was responsible for the carvings of old Makarsa, of Hát in the immediate neighbourhood near Bajaura, of Nast near Jagatsukh, and of Garh Dhek near Baragráon.

Conquest of Saráj.

Bahádur Singh next turned his arms against Saráj and subdued in turn Shángarh and Banogi. He then went through Srikot to Nohánda and took possession of it, after killing the Thákur. Bunga fell into his hands in the same manner and the Thákur of Sarchi submitted and was given a *jágír*. Rámgarh and Chaihni were also subdued. He seems to have employed as his principal general one Hathi who conquered Rúpi and was given as a reward the whole of Daliára village in Bhalán *kothi*. Half of Inner Saráj was conquered in this way by Bahádur Singh.

Relations with Chamba.

In 1559 A. D. Bahádur Singh contracted an alliance with the ruler of Chamba and gave three Kulu princesses to his son. As a reward for his assistance in arranging the alliance, he gave to the *Rájáguru*, or spiritual preceptor of the Chamba chiefs, lands and other benefits, and recorded the grant on a copper plate which is still extant.*

Partáp Singh.

Partáp Singh succeeded Bahádur Singh probably in the same year (1559). There still remained to be conquered the principality of Lag ruled by the descendants of the *parohit* of Rája Parbat Sen of Suket. This state included all the Sarvari valley and the right bank of the Beas from Raisan to Bajaura, half of Inner Saráj, the north-west portion of Outer Saráj, and all Saráj Mandi with a small portion of Chota Bangáhal. The first invasion of Lag took place probably in the reign of Bahádur Singh and Partáp Singh. Mandi co-operated, and the portions of Inner and Outer Saráj held by Lag were annexed to the Kulu State, while Mandi took the tract now known as Saráj Mandi. As a result of subsequent invasions of Lag, Mandi obtained Sanor and Badar, while Kulu took Pirkot, Madanpur and twelve neighbouring villages. The state was probably tributary to Kulu thereafter till its extinction by Jagat Singh.

Invasion of Lag.

The next Rájás were Parbat Singh (A. D. 1575 to 1608), Prithi Singh (A. D. 1608 to 1635) and Kalián Singh (A. D. 1635-37), the two last named being brothers. The chronicle gives no details of the reigns of these Rájás, which extended over a long period, and synchronised with the reigns of Akbar, Jahángír, and the early years of Shah Jahán. There is no reference to the Mughals in the chronicle, though it seems probable that Kulu—like most of the other Hill States—was subject to them from the time of Akbar.

The Mughal Emperors.

Jagat Singh.

Jagat Singh ruled from 1637--72, and was one of the most notable of the Kulu chiefs. During his reign the kingdom was further enlarged and consolidated. In the early part of it, he resided at Makarsa and from there directed his conquests of territory

*See the monograph by Dr. Vogel, which describes this document fully His theory regarding the conquest of Sultánpur by Bahádur Singh is not supported by other writers.

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Jagat Singh.

to the south, and on the right bank of the Beas, which still continued under the rule of Lag. Owing to his sin in demanding pearls (or a daughter) from a Brahman, who preferred to burn himself and his family in his house rather than submit to the exaction Jagat Singh found himself in the chains of a curse, and in expiation of his crime was constrained to steal the idol of Raghúnáth Ji from Oudh, and set it up in Kulu, transferring the whole kingdom to the god, and himself remaining as its vicegerent.*

Final conquest of Lag.

The State of Lag was at this time in the hands of two brothers, one of whom, Jog or Jai Chand, resided at Dughi Lag, and the other Sultán Chand, at Sultánpur, which according to one tradition was named after him.† Jagat Singh advanced against Lag by way of Dhálpur and first attacked Jog Chand, whom he finally caught and decapitated at the spot where a stone pillar near the Rái of Rúpi's house is still to be seen. Sultán Chand was killed in battle, and the territory remaining to Lag was annexed. Having thus completed the conquest of the whole of the upper Kulu valley, Jagat Singh transferred the capital from Naggar to Sultánpur, probably about 1660 A. D. and built a palace for himself and a temple for Raghúnath Ji there. Makarsa was then abandoned and probably soon fell into decay.

Lag was under the protection of the Delhi kings and in 1657 A. D. Dára Shikoh enjoined Jagat Singh to restore it on pain of destruction of his *zamíndári* by the Mughal Faujdár of Kángra, the Faujdár of Jammu, and the Rája of Núrpur. But the *farmán* of Dára Shikoh was disregarded and that prince soon fell into difficulties with his three brothers.

Relations with Delhi.

Of the thirteen Delhi *farmáns* which are still extant, in original or in copy, twelve are addressed to Jagat Singh between 1650 A. D. and 1658. One of them is from Aurangzeb, in which Jagat Singh is described as "well established in his royal ways," which points to a higher dignity than that of *zamíndár*, which is the title used in Muhammadan histories when referring to the Kulu rulers. He sent presents of hawks and crystal to Delhi and, as was customary, deputed his son as a hostage at the imperial court. In the *farmán* referred to, he was asked to join hands with Dhan Chand Kahlúria of Biláspur, in order to close the roads through the hills against Suleimán Shikoh, son of Dára Shikoh, who sought to join his

*This act is reminiscent of the grant of Lag Sari by Parbat Sen described above (page 25), and resembles the surrender of the Mandi realm to the God Mádho Rái by an heirless Raja of that state.

†Dr. Vogel would place the conquest of Sultánpur about a century earlier, in the reign of Bahádur Singh, who also called himself Sultán Singh, and mentions that the city is said by some to have been founded by Sultán Singh, Dhálpur being built by Dhal Singh, his brother: there is very little to support this theory.

father in the Punjab, where the latter had fled after his defeat by Aurangzeb and Murád Bakhsh at the battle of Samugarh in 1658 A. D.

Conquest of Outer Saráj.

Outer Saráj was still in the possession of Suket and Bashahr, so Jagat Singh invaded it and captured the forts of Naráingarh, Sirígarh, and Himri, and annexed the whole country. He died soon afterwards, having reigned for about 35 years.

Bidhi Singh.

Bidhi Singh, son of Jagat Singh, began to reign in 1672, and is said to have greatly extended the boundaries of the kingdom. In his reign, the Sutlej became the state boundary to the south, and he is even said to have conquered several of the smaller principalities of the Simla Hills and to have seized the *Kothís* of Dhaul, Kot and Kandhi from Bashahr.

Annexation of Láhul.

Towards the north, he was able to obtain a footing in Láhul, which had been since the middle of the twelfth century under Ladák and Chamba. Láhul was probably held by Kulu and Chamba from 1025—50 A. D. down to its conquest by Ladák about 1150 A. D. After that, Chamba probably continued to rule the main Chandrabhága valley as far up as the junction of the rivers at Tandi. Bidhi Singh then invaded Láhul and conquered the upper valleys from Ladák and acquired the main valley from Chamba down to the present boundary at Thirót, either by conquest or by private treaty.

Mán Singh.

Mán Singh reigned from 1688 A. D. to 1719, and had many wars with Mandi, as well as on the southern border. Under him the Kulu state reached the zenith of its power. He began by invading Mandi and conquered the country as far as the salt mines of Drang. He retired, however, whether under pressure or by treaty, and a dagger presented by him on this occasion to Gur Sen, Rája of Mandi, is still preserved in the Mandi armoury.

He completed the conquest of Outer Saráj by taking Pandrabís from Bashahr, and built three forts in that *Kothi*.

Annexation of Bangáhal.

About 1700 A. D. he again took the field against Mandi in consequence of the treacherous murder of Prithi Pál, Rája of Bangáhal, at Mandi. Bangáhal was an ancient principality, with its capital at Bír, and embraced most of the country along the outskirts of the Dhaola Dhár as far as the Beas river, as well as all Bara Bangáhal. Prithi Pál's daughter was married to Sidh Sen of Mandi and his sister to Mán Singh of Kulu. Mán Singh then invaded Bangáhal by way of the Sari Pass, and annexed Bara and Chhota Bangáhal and part of Bír. Mandi obtained Ner and Chohár only.

On trouble arising with Ladák, Mán Singh marched through Láhul and fixed the northern boundary probably where it now is at Lingti, and also made Spiti tributary.

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His next expedition took him across the Sutlej, where he reduced and annexed Shángri and conferred a *jágír* on its Thákur: he also took tribute from Kotgarh, Kumhársen and Balsan.

Further fighting with Mandi.

Soon afterwards, the Raja of Mandi invaded the Sarvari valley but was beaten back, a large part of his force perishing in a ravine near Mángarh. Mán Singh pursued the remainder and captured Guma and Drang, but was content to restore the territory he had seized, on being paid a large sum of money.

Mán Singh's reign came to a tragic end. Having fallen in love with the wife of the Rája of Kumhársen, her husband enticed him across the Sutlej unguarded, and he was then set upon by Bashábrís and killed. During his rule Kulu had become a powerful state, embracing an area of at least 10,000 square miles. In addition to Kulu proper it comprised Láhul, Bara and Chhota Bangáhal and Spiti, while to the south it extended nearly to Simla and the town of Mandi. Mán Singh's name is well remembered in Kulu.

Ráj Singh.

Ráj Singh came to the throne in 1719 A. D. His reign seems to have been uneventful. He died about 1731 A. D. and was succeeded by his son Jai Singh.

Jai Singh.

Jai Singh was constrained, by a revolt on the part of Kálu, Wazír of Dyar (who had been banished to Kepu in the Kotgarh *iláqa*), to flee to Lahore to the Mughal viceroy. He did not return but went on a pilgrimage to Oudh and there devoted himself to the worship of Raghúnath Ji. His brother Tedhi Singh went to Kulu, but many of the people refused to acknowledge him, probably in the expectation that Jai Singh would return. Tedhi Singh then enlisted a band of wandering Bairagís as his mercenaries and employed them to murder many of his opponents at Sultánpur. This crime however only resulted in another outbreak of a more serious character, led by a Sunyási *faqír*, who claimed to be Rája Jai Singh, returned from exile. The revolt lasted for some time, till the death of Jai Singh, when the men who had been with him returned and the impostor was then exposed and killed.

Tedhi Singh.

Relations with Kángra.

Tedhi Singh was a contemporary of Rája Ghamand Chand of Kángra, grandfather of Rája Sansár Chand, and it must have been during this reign that Ghamand Chand's invasion of Kulu, referred to by Moorcroft, took place. On that occasion the images on the Hát temple were mutilated probably by Muhammadan mercenaries. Rája Ghamand Chand, who had been appointed Governor of the Jullundur Doáb by Ahmad Shah Duráni, probably thought to extend his power over all the Hill States, but he was thwarted by the Sikh inroads which began

under Jassa Singh Rámgarhía soon after 1760 A. D. and in the confusion most of the Hill States recovered their independence.

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Tedhi Singh died without legitimate issue in 1767 A. D. and his eldest son by a concubine, Prítham Singh, was recognised as Rája. Soon after his accession he invaded Mandi and recovered three forts.

Prítham Singh.

There is no mention of the Sikhs in the Kulu records till a later period, but their influence must have been felt from an early date in Prítham Singh's reign. Jassa Singh Rámgarhía established a suzerainty over many of the Hill States before 1770, and in 1776 after his defeat in the plains the suzerainty passed to Jai Singh Kanheya. This chief joined with Sansár Chand of Kángra to capture Kángra Fort, and though it was surrendered to Jai Singh Kanheya, it passed to Sansár Chand on Jai Singh's defeat in the Punjab (1786). With the possession of Kángra Fort, Sansár Chand also acquired the supremacy over all the Hill States between the Sutlej and the Ravi, and maintained it for twenty years.

Relations with the Sikhs and Sansár Chand.

Prítham Singh's reign seems to have been on the whole uneventful and prosperous, but a plot was hatched against him by Chamba, Kángra and Mandi to invade Makarsa (Kulu) and seize Bangáhal, in 1778. This was carried out by the Rája of Chamba who annexed part of Bír Bangáhal.

In 1786, again, an agreement was concluded between Chamba, Mandi and Kahlúr to invade Makarsa and divide it equally among them. But nothing seems to have come of this.

Sansár Chand with his force of trained mercenaries coerced all the hill chiefs and forced them to pay him tribute and send him contingents of troops for his military expeditions. But he seems to have interfered less with Kulu than with the other states, owing probably to its isolated position. He took Chohár from Mandi in 1792 and gave it to Kulu, but it was at a later date restored. Prítham Singh in 1801 offered help to Chamba against Kángra, but mutual distrust prevented combined action on the part of the hill Rájás. Prítham Singh is known chiefly for the numerous grants which he gave to temples. He died about 1806 A. D. and was succeeded by his son Bikrama Singh.

In the early part of Bikrama Singh's reign, Mandi recovered the three forts which had been taken by Prítham Singh. The Gurkhas had conquered the hill country west of Nepál as far as the Sutlej and Kulu paid tribute to them for Shángri, and for Kulu itself to Sansár Chand. Subsequently a combination of the hill chiefs with the Gurkhas drove Sansár Chand into Kángra Fort, and when he appealed to Ranjít Singh the

Bikrama Singh.

Sikhs took the fort as their price for driving out the Gurkhas and thus obtained the supremacy over all the hill states.

Sikhs invade Kulu.

Soon after, probably in 1810, Ranjít Singh sent a Díwán to Kulu with a demand for tribute, which was paid to the amount of Rs. 40,000. Three years later, on a second demand not being complied with, an army under Díwán Mohkam Chand crossed the Bajaura pass and encamped in the valley; negotiations began, and the Sikhs are said to have demanded an annual tribute of Rs. 50,000, to which the Rája would not agree. Thereupon the Sikhs advanced, and the Rája fled up the mountains, leaving his palace and capital of Sultánpur to be sacked by the invaders. Eventually he had to bribe them to leave the country by paying them all the money he could scrape together.* About this time, in 1814-15, the Gurkhas were driven back into Nepál by the English and the Governor-General granted a *sanad* for Shángri to the Rája, who, like the other Cis-Sutlej hill chiefs, had taken side against the Gurkhas. Bikrama Singh, like his grandfather, had no sons by his Ránís, and on his death in A. D. 1816 left the throne to Ajít Singh, his son by a Khwási. The Rája of Mandi, by deputy, performed the ceremony of investiture, or seating Ajít Singh on the throne. These facts led to a disturbance, for soon after a party in Kulu, headed by some influential Wazírs, stirred up Kishen Singh, the Rája's uncle, who was residing in Kángra, to dispute the succession.

Ajít Singh.

Sansár Chand, the Katoch Rája, in spite of his reverses, still claimed the right of conferring investiture as lord paramount of the Jálandhar circle of hill chiefs, and in revenge for its disregard he assisted Kishen Singh in collecting a force in the Katoch country with which to invade Kulu. The first attack was repulsed; the second, with the aid of a Mandi contingent, advanced into Kulu, and seemed about to succeed, when the Mandi Rája, in obedience to an order obtained by Kulu from Lahore, threw his weight on the other side, and Kishen Singh was made a prisoner with all his force. The Katoch men in it were stripped naked and left to find their way home over the mountains in this disgraceful plight. A pithy rhyme is repeated in Kulu to preserve the memory of the achievement. After Kishen Singh's death, which happened immediately afterwards, a boy (who will have to be mentioned hereafter by the name of Partáb Singh), was produced by his friends as his posthumous son, but

*Moorcroft mentions that in A. D. 1820 Sobha Rám, Wazír of Kulu, complained to him of having had to pay Rs. 80,000 to Ranjít Singh for allowing Shuja-ul-Mulk, the ex-king of Kábul, to pass through Kulu *en route* to Ludhiána. This was probably only one of the offences imputed to Kulu by Ranjít Singh, but the Wazír mentioned it as the only one to make out that Kulu had suffered for compliance to the English. Shuja-ul-Mulk in his diary abuses the Kulu people and says they treated him most inhospitably.

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the other faction called him a suppositious child, and the son of a Bangáhália Mián. The Mandi Rája, as a reward for the assistance he had given against Kishen Singh, claimed and obtained two forts and a piece of Chohár, the only remaining part of that country which Kulu had up to this time managed to retain.

In A.D. 1839 the Sikh Government sent a force under General Ventura against the neighbouring state of Mandi. It met with slight resistance, and the Rája of Mandi was made prisoner and sent to Amritsar. Having penetrated so far into the hills, the opportunity of attacking Kulu was too good to be lost; so on the pretext that Kulu had shown a disposition to help Mandi, a force under the Sindhánwála Sardár was sent into the country. No resistance was made, and the Rája beguiled by fair promises and wishing to save Sultánpur and his palace from another sack, allowed himself to be made a prisoner.

Measures taken by the Sikhs for the subjection of Saráj; surprise and destruction of one of their armies;

As soon as the Sikhs had got the Rája into their power they showed an intention of taking possession of the whole country; and as the quickest means of reducing the hill forts of Saráj which still held out, a force was detached, which marched through that country, carrying the Rája with it, and compelling him before each fort to order the commandant to surrender. The Sikhs, completely confident, committed excesses, and treated the Rája with brutal want of courtesy; his guards are said to have amused themselves by pulling him on to his feet by his long moustaches. The hill-men are remarkable for the loyalty and respect they have for their hereditary Rájás, and the report of this indignity angered them particularly. A plot to attack the Sikhs and rescue the Rája was devised by Kapuru, Wazír of Saráj, the head of a branch of the family of Wazírs of Diár. A sort of fiery-cross was sent round. and men were secretly mustered from all parts of Saráj. The Sikh force was probably about one thousand strong; it had done its work, and had returned from Outer Saráj by the Bashleo Pass. A little way below the fort of Tung, the road, a mere footpath, and here very narrow, ran along the bank of a wooded ravine; in these woods the Sarájís lay in ambush and awaited the Sikhs, who came marching along in single file and undisturbed by any feeling of insecurity. When that part of the line which held the Rája came opposite the ambush, a sudden rush was made, a few men were cut down, and the Rája was caught up and carried swiftly up the mountain side. At the same time all along the line rocks were rolled down and shots fired from above at the Sikhs, who were seized with a panic, and fell back into the fort of Tung. Here they remained two days, till they were forced to move out by the failure of their provisions. They were attacked again in the same way as they

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Measures taken by the Sikhs for the subjection of Saráj; surprise and destruction of one of their armies.

marched down the valley, and made slow progress. At last they struck up the mountain side in *Kothi* Nohanda, hoping to get supplies and uncommanded ground in the villages above. But they did not know the country, and only got on to a particularly barren, steep, and rugged hillside where they could barely keep their footing, and did not even find water to drink. The light and active hill-men kept above them wherever they went, knocking over some with rocks, and driving others to fall over the precipices. After a night spent in this way the miserable remnant were driven down again into the valley, and there induced to give up their arms, on the promise that their lives should be spared.* But no sooner had they been disarmed, then the Sarájís set upon them, and massacred them without pity. One or two camp followers, not regular Sikhs, were the only survivors. At the news of this triumph, which occurred in the spring of A. D. 1840, some of the Kulu people gathered on the hills round Sultánpur, and made an attempt to rescue the two Ránís who were detained in the palace there; but the Sikhs easily repulsed them. Ajít Singh, the rescued Rája, retired across the Sutlej to his territory of Shángri. Here he knew he would be safe from the revenge which the Sikhs were sure to take on the Sarájís; for the Sutlej was the boundary line between the Sikh and English Governments, and the Rája held Shángri from the latter. A Sikh force soon after marched to Saráj and found the country completely deserted; every soul had fled into inaccessible places in the forests high up the mountains. After burning and plundering some villages the Sikhs retired, and handed over the country in *ijára* or farm to the Rája of Mandi for an annual rental of some Rs. 32,000.

Proceedings of the Sikhs in Kulu; their treatment of the Raja's family.

In Kulu, however, a Sikh force was retained, and a *Kárdár* appointed to the management of the revenue. In the autumn of 1841 the two Ránís escaped from their prison in the palace by exchanging clothes with the women who brought in grass, and fled up the mountains. They were on their way by a circuitous path to join the Rája at Shángri, when they heard the news of his death, which happened there in September 1841. Instead of going on to be burnt with his remains according to the custom of the family, they returned to the palace at Sultánpur, and began intrigues with the Sikh officials with regard to the choice of a successor to the title of Rája. The Sikhs at this time seem to have intended to give up the occupation of Kulu, and to install as Rája some one of the family to hold the country at a heavy tribute. Mahárája Sher Singh, who had succeeded Ranjít Singh

* It is said that the Sarájís sent four or five low-caste men, dressed as Brahmans, into the rough entrenchment which the Sikhs had thrown up. These *pseudo*-Brahmans, with their hands on a cow's tail, swore that the lives of the Sikhs should be spared.

about two years before this time, had been much in the hills, and was inclined to be lenient to the hill chiefs. When Ajít Singh died at Shángri, Mr. Erskine, the Superintendent of Simla Hill States, made an enquiry as to the succession to that fief, and reported in favour of Rambhír Singh, the infant son of Mián Jagar Singh, who had accompanied his first cousin, Ajít Singh, to Shángri. Jagar Singh was himself alive, but was passed over because he was almost half-witted. After this the Ránís sent for the child to Sultánpur, and the Sikh officials there also admitted his claim. It was determined that he should be sent to Lahore to receive investiture; but on the way at Mandi he fell sick and died. The Sikhs then selected Thákur Singh, a first cousin once removed of Ajít Singh, made him titular Rája and gave him Wazíri Rúpi in *jágír*. It is said that they offered to hand over the whole country to him at a heavy tribute; but Thákur Singh was a dull and timid kind of man, and refused the responsibility. Shángri remained in possession of the imbecile Jagar Singh.

Proceedings of the Sikhs in Kulu; their treatment of the Rája's family.

Three or four years later, in March 1846, at the close of the first Sikh war, the Trans-Sutlej States, that is, the Jullundur Doáb and the hill country between the Sutlej and Ravi, were ceded to the English Government by the Sikhs, and Kulu, with Láhul and Spiti, became a portion of the new district of Kángra. The Commissioner of the Trans-Sutlej States (Mr. John Lawrence) marched up to Sultánpur, and made a Summary Settlement of the country in the Beas valley. In the autumn of the same year the sub-division, which then included *talúqa* Bangáhal, was transferred to the jurisdiction of the Superintendent of the Simla Hill States. In 1847 Mr. Erskine, the Superintendent, was engaged for some time in Kulu Proper in completing the Summary Settlement and investigating the rent-free tenures. Soon after Major Hay was appointed Assistant Commissioner in charge of the sub-division and fixed his head-quarters at the old castle of Nagar in Parol.

Annexation to British territory and subsequent history.

About the same time Kulu was again united to the Kángra district, and at the request of the landholders, the *talúqa* of Bangáhal was separated from it and added to Tahsil Kángra.

The Government confirmed Thákur Singh in his title of Rája, and gave him sovereign powers within his *jágír* of Rúpi. Jagar Singh of Shángri made a claim at Simla, but was told to be content with what he had got. He had no son at this time; but one named Híra Singh was born a few years later. On Thákur Singh's death, in 1852, there was some question whether the whole *jágír* should not be resumed, as the mother of his only son, Gyán Singh, was not a regular wife, but only a Khwási. It was decided to give him the title of Rái instead of Rája, and

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only half the *jágír* with no political powers; but three years later, on a reconsideration of his claims, the resumed half was given back to him. Government, however, gave no powers, and reserved to itself the exclusive right to fell and sell timber in the whole *jágír*.

The Mutiny.

Shortly before the outbreak of the Mutiny in the spring of 1857 a man appeared in Kulu and asserted himself to be the Partáb Singh who after the death of Kishen Singh was, as mentioned above, put forward as his posthumous son. Perhaps he was the man, though Partáb Singh had disappeared for some time, and had been believed to have been killed fighting against us in the first Sikh war. One of Ajít Singh's Ránís and some other people in Kulu believed him and befriended him. When the news of the Mutiny arrived, this man began intriguing and trying to get up a party. He wrote letters asserting his claim to the throne of Kulu, and vaguely inciting an insurrection against the English. Major Hay, the Assistant Commissioner of Kulu, arrested him, and he was hung for treason at Dharmsála. The common people in Kulu believe that it was the real Partáb Singh who suffered; others, particularly those connected with Rái Gyán Singh, assert that the man was an impostor. The only other incident connected with the Mutiny is the arrest of a party of fugitive sepoys in Spiti. Those few of the Sialkot mutineers who got away from the field of Trimu Ghât fled into the Jammu hills. A small body of them, in the attempt to avoid British territory and return by a circuitous route to Hindustán, made their way through the mountains to Ladák, and thence to Spiti, which they reached in a miserable plight. The Spiti men detained them and sent notice to the Assistant Commissioner of Kulu (Mr. G. Knox), who came at once with a few police and arrested them.

The descendants of the Kulu Rája.

Rái Gyán Singh died in 1869, and was succeeded by Rái Dhalíp Singh, his son, to whom the estate was handed over on his attaining majority in the year 1883. It had during the interval been under the charge of the court of wards. The young man enjoyed his possessions for nine years only, succumbing in 1892 to an attack of confluent small-pox. He left no male issue except a son by a Thákur-Rájpútni concubine. To this boy, Megh Singh, the *jágír* was continued by Government as a matter of grace, but subject to certain limitations which will be noticed in chapter III, where the assessment of Rúpi is dealt with.

ARCHÆOLOGY.

Kulu is not so rich in archæological remains as some of the other hill tracts. The temples indeed are numerous, but

the more important of them are not ancient, though of historical and archæological interest. As is usual in the hills, they are of two kinds, and are designated as Hill-Temples and Plains-Temples.

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Hill-temples.

The indigenous hill-temple is built of wood and stone, and has either a pent roof covered with slates or shingles, or a pyramidal wooden roof, sometimes rising in several tiers like a pagoda. The latter style of roof is also found in Kashmír and Nepál, but does not seem to be common elsewhere in the hills. In Kulu the pent-roofed village temple is most common, and there are only four examples of the pagoda-like roof, namely, the temples of Hirmán Devi at Dhungri, near Manáli, of Tripara Sundari Devi at Nagar, of Tarjugi Naráin (Triyuga Naráyana) at Dyár, opposite Bajaura, and of Ad Brahm at Khokhan. The hill-temples are the more ancient though some of them are of modern date; they are found all over the valley and on the mountain slopes, in great numbers. Their construction is extremely simple, and usually consists of a small *cella* raised on a square plinth of heavy timber, and built of alternating layers of wood and stone. This is covered in by a sloping roof of slates or shingles, supported on wooden pillars, forming a verandah or procession path round the shrine. The front is often decorated with rough carvings, as also the pillars and ceilings. A low doorway gives access to the interior of the shrine where the image is placed, and this may be of wood or brass. Similar temples are found in all the hill tracts, associated with Nág and Devi worship, which is the most ancient form of religion in the hills. Most of the temples of this type in Kulu must, therefore, be of very ancient origin; the woodwork naturally needs periodic renewal, involving the dismantling of the main portions of the structure, but the *cella* is seldom renewed, and is generally very old. Perhaps the most remarkable hill-temple in the Beas Valley is that of Bijli Mahádev which stands on the head of the bluff overlooking Bhuin, between the valleys of the Beas and its tributary the Párbati. It is large and very substantially built, and measures in length 36 feet and 24 feet in breadth. The lower part of the walls, as often in hill-temples, is made of finely cut large stones, no plaster or mortar being used. A covered verandah of carved deodar surrounds the building (deodar is nearly always used for temples) and the sloping roof is formed of six tiers of planks of the same wood, being protected at the top by a heavy ridge-beam, on which are placed small blocks, stuck over with iron tridents. At the entrance on the west are carved uprights and much open carving also surrounds the arched windows of the fretted verandah. The special feature of this temple is, however, the tall staff, some sixty feet in height, which stands

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Section B.
Hill temples.

on the north side a few feet away from the building, and can be generally seen from Sultánpur. It is supposed to attract the blessing of heaven in the form of lighting, and is probably a survival of the Buddhism which Hiuen Tsiang found everywhere in the valley in the seventh century A. D.

The Dhungri temple with three tiers of roof is more solidly constructed than most of the temples of Kulu, and the carvings are more elaborate. The situation is gloomy, set in the midst of immense deodars which must be over a thousand years old. The interior is still more savage; there are large boulders lying in the half-darkness, and a rope hanging from the roof to which human victims, it is said, were suspended in old days, after death, and swung over the head of the goddess, Hirman Devi. This room is occasionally used now for incarcerating *deotas* in times of drought, to bring them to a better mind. The inscription on the doorway to the east, states that the temple was founded in a year corresponding to 1553 A. D. by Rája Bahádur Singh.

Plains temples

The Plains temples are entirely built of stone, and decorated with carvings: they are built in a tower-like conical formation (*shikára*). The type is as rare in the hills as it is common in the plains. For a full description of it, reference may be made to Ferguson's Indian Archæology. Captain Harcourt enumerates only sixteen buildings of this kind in the whole of the Kulu Valley, hardly any of which dates back farther than the 17th century, when the Rájás of Kulu introduced the worship of Vishnu and Ráma. Even of these some are small and insignificant shrines. They consist of a *cella* in which the image is placed, and the building, which tapers towards the upper part like a plantain fruit, is surmounted by the ribbed *amálaka* stone, forming the top of the spire, or by a wooden canopy.

The temple of Basheshar Mahádev at Hát.

The temple of Basheshar Mahádev at Hát is one of the most ancient and finest shrines in the Kulu Valley. It is constructed entirely of stone and is a *shikára* temple, dedicated to Shiv but now hardly used at all. The structure is a protected monument and has been in its present dilapidated condition for many years; the earthquake of 1905 did no further damage. The hand of man is responsible for the mutilation of the statuary, which occurred probably in an invasion of Kulu by Rája Ghamand Chand of Kángra about A. D. 1760-70. Descriptions of this temple are given in Captain Harcourt's book on Kulu and by Dr. Vogel in the Archæological Report of 1909-10. The main features are all that can be described here. The sanctum is a small one, only measuring 8½ feet by 7 feet 2 inches, the thick walls bringing the outside measurements to 13 feet square. In addition 4 porches project: the eastern one contains the doorway with figures

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The temple of Basheshar Mahádev at Hát.

representing the Ganges and Jumna rivers on the left and right sides respectively, as the door is entered: on the south side is Ganesh, on the west Vishnu, and on the north Durga. The image slabs in the three niches on the north, west and south are 5 feet 3 inches in height and all have the common feature of a flaming halo behind the main figure; the triple-pointed diadems on the figures of Vishnu and Durga are also repeated on the river statues at the doorway. The excellence of the carving points to an early date of execution and the common features above-mentioned give the statuary a simultaneous origin. More than this cannot be said for the chronology except that the date of the building must be long anterior to the inscription on the doorway, which gives a date corresponding to A. D. 1673 for a grant of land by a Rája Syâm Sen of Mandi. This land has long since been lost to the temple.

In the sanctum is a *lingam* of Shiv. On the top of each porch is a triplet of miniature shrines surmounted by a triple face or *Bhadra mukhi*, which is common in the hills (*e. g.*, at Garh Dhek) and either represents the Trimúrti of Brahma, Vishnu and Shiv, or the triple form of Shiv alone. The whole of the outside is deeply carved mostly in the pot and foliage motive, which is here doubled, one of each pair being placed over the other. There is an *amálaka* stone on top. The most beautiful pieces of statuary are undoubtedly the bas-reliefs of Vishnu on the west, and the river figures on the east: the detail is very well finished, the figures are tall and very gracefully shown against the background of foliage and attendant smaller figures. Durga is represented as slaying the two Asura kings and the buffalo-demon: the scene is a lively one, full of incident and a display of terrible might. The slab of Ganesh has been broken at the top, but is not otherwise much injured: it breathes good-humour and prosperity.

The temple can be easily visited, as it stands among fields about half a mile only from the Bajaura Dâk Bungalow.

Coin of Viráyása.

The coin of king Viráyása has been noticed already on page 1. It is the oldest historical and archæological record in Kulu, and was first described by Sir A. Cunningham in his "Coins of Ancient India," page 67, plate X, No. 14. The correct reading of the legend on the coin was established by the Swede Dr. Bergny (*see* Journal of the Royal Asiatic Society, 1900, pages 415 *seq.* and 420). Professor Rapson (*ibid*, page 429: *see* also pages 537 *seq.*) says: "This is a most important correction, for it adds one more to the list of ancient Indian States which are known to us from their coinage." The name of the king is not found in any genealogical roll, but the coin is probably

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Coin of Virśyas.

assignable on palæographical grounds to the 2nd century A. D. The coin is bi-literal: the full legend is in Sanskrit (*see* page 1): and there is added the word *raña* ("of the king") in Kharoshṭhi. Other bi-literal coins in these scripts are those of the Andumbaras and the Kuṇindas: so also are the rock inscriptions in the Kángra Valley. It is clear, indeed, that in Kulu, as in other parts of the hills, two scripts were once in common use—the indigenous Bráhmi (from which all modern alphabets of India are derived), and the Kharoshthi, written from right to left, which was introduced by the Achæmenids into the north-west of India, then forming part of their empire (*see* Chamba Gazetteer, page 49).

Inscriptions on stone.

Inscriptions in Kulu are rare and the country has probably never known a period of literary activity. They are recorded on rocks, temples, gods' images and masks, and copper-plate title-deeds and are of considerable historical value. The oldest is the rock-inscription at Sálri near the village of Salánu in Mandi, on ground which must once have been in Kulu. The characters of this record are of the 4th or 5th century A. D., and it mentions the victory of one king over another, the identity of neither potentate being at present known. Besides the inscriptions on the temples, mentioned above (Dhungri, Hát and Jagatsukh), there is one on the wall of the temple of Thákur Murli Dhar at Katehr, K. Chaihni, dated A. D. 1674-75, in the reign of Rája Bidhi Singh. In all, ten such records on stone were discovered twelve years ago, and five of them are dated between 1673 and 1870 but are partly illegible. They are all in Tánkri characters, and in the local dialect.

Copper-plate inscriptions.

The inscriptions on copper-plates are of a somewhat different character and record grants of lands to Brahmans and temples. These are eleven in number, and the oldest is that which contains the grant of the Nirmand temple, probably in the 7th century A.D., by a Rája Samudra Sena, who was possibly one of the pre-Buddhist Rájrs of Spiti. That given by Rája Bahádur Singh of Kulu is in Chamba and records a grant of land and other boons to one Rámapati, the Rájaguru or spiritual preceptor of the Chamba Chief on the occasion of the marriage of the heir-apparent of the latter State to three Kulu princesses. It was probably granted for services rendered on that occasion and is dated A. D. 1559. There are also four copper-plates of the reign of Rája Jagat Singh dated in A. D. 1651 and 1656, recording grants of land: one of the reign of Rája Ráj Singh, undated; and one of Rája Pritham Singh, dated A. D. 1780. These are all in Tánkari and in the local dialect.

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Inscriptions on Deo masks.

The *deotás'* masks are of metal and were presented to various temples by the Rájás whose names they bear. Their value as records lies in the fact that they all bear a date and are, therefore, of importance chronologically in fixing the reigns of the Rájás. The masks represent Hindu gods and deified personages. Unfortunately the tendency to replace old objects by new ones has caused much loss, as those in charge often melted down the old masks for the purpose of renewing them. This may be the reason why so few old inscribed masks are now forthcoming. Of the Pál dynasty only two have been found, one of Udhrán Pál bearing the date 94 = A. D. 1418, on the mask of Hirma Devi at Dhungri, and the other dated 76 = A. D. 1500 with the name of Sidh Pal on the mask of Vishnu at Sajla, Kothi Barsai. As the Rájás of the Singh surname reigned at a comparatively late period, their gifts are better preserved and the names of most of them are found on the masks. The mask inscriptions not already noticed include—

Deota.	Place.	Rája.	Date.
Devi Bhága-Sidh	Pini, Kais	Parbat Singh	1575
Gúmal	Shát, Chúng	Pirthi Singh	1608-35
Chirmal	Naján, Kotkandhi	Ditto	1608-35
Narain	Chhamá'in, Kais	Bidhi Singh	1688
Jawalu Mahádev	Jawáni, Kais	Mán Singh	1712-17
Kapalmuni	Bashona, Kotkandhi	Ditto	1712-17
Devi Kutli	So'il, Barsái	Ráj Singh	1729
Narain	Chhamá'in, Kais	Jai Singh	1731
Ad Brahm	Khokhan	Tedhi Singh	1753
Hardása	Maníkaran	Bikram Singh	1802-07

Manuscripts.

The chief manuscripts are the *farmáns* or official letters issued from the Mughal Court at Delhi, between the years 1650 and 1658 A. D., to Rája Jagat Singh. These number thirteen ; 4 are originals in the possession of Rái Hira Singh of Dalásh, and the remainder are copies, owned by the Rái of Rúpi, their originals being lost. Twelve were issued under the seal of Dára Shikoh and one by Aurangzeb (*see* page 28).

There is also a booklet, consisting of nine loose pages, in the hands of the priests at Maníkaran: it is called *Kulántapíṭhá-máhátmya*, and purports to be a part of the *Brahmanda-purana*.

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Manuscripts.

It describes the tract called *Kulántapiṭha*, as roughly corresponding to Wazíri Parol on the east side of Beas, taking that river as rising in the Solang Valley, at the Beas Kund. The name of the tract is, however, not a parent of the word "Kulu."

Ancient remains.

Ruins of old towns exist at Makráhar in Kot Kandhi, Hát near Bajaura, Nast near Jagatsukh, Tháwa at Naggar, Garh Dhek at Baragráon, and old forts at Manjan Kot, Manáli, at Baragarh, and at many places in Saráj and Rúpi, such as Bunga, Raghúpur, Tilokpur. Old towers are to be seen at Dhaliára in Kothi Bhalán, Dashyár near Sainja, and Katehr in Kothi Chaihni. The last-named is a remarkable tower built solid of stone for about 40 feet of height; above that it contains living rooms for another 30 feet; the structure is a conspicuous landmark in the Tirthan Valley.

Protected monuments.

The protected monuments consist of the temple of Basheshar Mahádev at Hát, and the two temples of Gauríshankar at Naggar and at Dashál, a neighbouring village.

SECTION C.

POPULATION.

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Density of the population.

The density of the population cannot be adequately estimated without first taking into account the large areas of forest land. The cultivated zone lies chiefly near the rivers, but hamlets are also found scattered among patches of forest. Out of the total area of 1,912 square miles an area of only 131 square miles is cultivated, and the proportion of waste varies considerably in the different Wazíris. The density of the population per square mile of cultivation in each Wazíri is as follows :-

Waziri.	Population per square mile of cultivation at census of			
	1868.	1881.	1891.	1911.
Parol ... ... / Lag Mahárája ... ... / Lag Sari	778	885	939	977
Rúpi	781	871	902	913
Inner Saráj	906	974	1,008	967
Outer Saráj	727	806	853	788

The figures for 1911 for Saráj were vitiated by the fact that many persons were absent for work at the time of the census. The density is heavy, particularly in Rúpi and Inner Saráj. In the other Wazíris of Kulu the broad fields irrigated and unirrigated can support the population more easily.

Growth of the population.

The figures of the total population for the last four censuses are as follows : --

Tahsil.	1868.	1881.	1891.	1911.
Kulu	45,906	52,105	55,100	62,648
Saráj	44,355	48,146	50,551	50,766
Total ...	90,261	100,251	105,651	113,414
Increase on last census...	...	11·5	5·9	7·3

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Growth of the population.

The increments at last census were estimated to be:

Wazíris Parol, Lag Mahárája, Lag Sari—10 per cent.; Rupi—12 per cent.; Inner Saráj—3·7 per cent.; and a decrease of 1·4 per cent. in Outer Saráj, the latter figure being due to absences.

The population has not grown very considerably in the last thirty years and the reasons seem to be the poor means of subsistence, the insanitary habits of the people, their ignorance of medicine and midwifery, and the neglect of children. Food is on the whole poor in quality, the want of cleanliness extends to the surroundings of the houses as well as to the person, there is a general ignorance of ordinary principles of medicine and surgery, and midwifery is non-existent as a science. There must be a very large mortality of women at child-birth and of infants, though separate statistics of it are not available. Domestic life is very often unhappy: the men are apt to treat the women as drudges and to neglect them when they are ill: the women frequently quarrel with the other wives of their husbands and are not inclined to make the best of the latter: they are often hard at work or away from home, and the result frequently is that nobody looks after the children: the men seem on the whole to be fonder of the children than the women are. All these facts must have their effect on the growth of the population.

Distribution of the population by families and houses.

The figures for distribution of the population by families and by houses were not worked out separately for Kulu in 1911: nor were age or vital statistics, or statistics of civil condition. The following figures are quoted from the census of 1891:—

Tahsil.	Families per 100 inhabited houses.	Persons per 100 inhabited houses.	Persons per 100 families.
Kulu	113	520	460
Saráj	105	570	540

The average of about one inhabited house to a family represents a high standard of comfort in regard to house accommodation, for the houses are mostly well-built and the peasant has in addition to his residence several detached buildings such as barns, sheep and cattle sheds, and small cottages (*dogri*) lying at distance from his residence, built to facilitate the cultivation of remote fields. The number of houses counted at the

census of 1911 for Saráj was 9,818 and for Kulu tahsil 25,865. The latter figure includes Láhul and Spiti and the number of persons to every 100 houses works out at 517 for Saráj and 439 for Kulu tahsil.

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TOWNS AND VILLAGES.

Village sites and houses.

A Kulu village, viewed from some little distance, usually presents both a picturesque appearance and an air of solid comfort. The site has probably not been selected with a view either to effect as to drainage or sanitation, but has been chosen as being the most worthless piece of land available in the near vicinity of the fields of the proprietors. As this, however, is generally a rocky spur protruding from the wooded hillside or a stony hillock on the edge of the forest, the general aspect is pleasing to the eye and a natural drainage is unintentionally obtained, though the permanent dung-heaps maintained to supply manure for the fields are not calculated to improve the health of the hamlet and render a near approach somewhat disappointing. The houses are generally detached and are grouped with a delightful disregard of method and plan, for their arrangement necessarily depends on the nature of the ground on which they stand. In structure they are very quaint and pretty, like square or oblong turrets much greater in height than in length or breadth and crowned by sloping gable roofs covered with slates or with fir shingles. The length and breadth of the building are fixed according to what may be called standard plans, the favourite being 9 *háths* by 9 *háths*; 11 by 9; 15 by 9; 15 by 11; 18 by 9; and 18 by 11; a *háth* is equal to 1½ feet. From a foundation of the dimensions of one or other of these plans the house shoots up three or four storeys high. No mortar is used in its construction; the walls are of dry-stone masonry, the stones being kept in place by timbers placed upon them at vertical intervals of two or three feet; an ordinary house of forty or fifty feet in height thus shows ten, twenty, or thirty layers of beams in its walls, the interstices between which are filled with roughly squared gray stone. The more wood the greater is the solidity and the less the necessity for care in packing the stone, and consequently the peasant's idea of a fine house is one in which each beam in the side wall has its ends resting on beams of the end walls and the masonry intervals are of less width than the beams; this style of architecture, which is locally known as *kát-kuni*, or "timber-cornered," is very pretty, but if universally adopted would cause a severe drain on the forests. The ground floor has no windows and is almost invariably used for stalling the cattle; it sometimes contains separate closets for calves and also compartments for storing grain, the latter reached from the first floor through a compartment in the

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ceiling. The ceiling is of clean wooden planks. which form the floor of the second storey, generally a granary and store-room lighted by narrow, unglazed windows. Above this is the third storey or second floor, immediately under the roof in which there is a rude chimney hole for the escape of the smoke from the stone slab placed in the middle of the room to form the hearth. Here the family live and sleep, and also cook and eat their meals. The accommodation on this floor is considerably extended by the addition of a wooden balcony protruding from it on one or two or on all four sides ; the floor of the balcony is on the same level as that of the room and consists of long planks resting on horizontal props projecting from the walls. This balcony is the nursery or play-room of the children, who sprawl about upon it without apparently ever coming to any harm even when there is nothing along its edge to keep them from rolling over. Usually, however, the outer edge of the balcony is enclosed by upright planks which meet the eaves, and the balcony thus becomes a series of extra rooms and closets, so that a large family can be comfortably enough lodged on the top storey of the house. The effect of this closed-in balcony immediately under the roof is to give the building a top-heavy appearance, but the structures are quite substantial. It is through the balcony generally that a house is entered by means of a rough ladder outside the wall ; the ladder usually consists of a log with notches cut in it, but in the better class of houses is replaced by a substantial wooden staircase. Within access is had from the top storey to the granary on the first floor by means of a trap-door. Such is the general type of a Kulu house, but it is subject to numerous local variations. In Upper Kulu the first floor granary is often omitted and the house consists of two storeys only : in Saráj massive houses of four or even five storeys are to be seen in places. Round the house is a yard paved with flat slabs and enclosed by a low dry-stone wall; it is used as a threshing-floor and also for oil-pressing, rice-husking and other domestic purposes. An ordinary sized house is sufficient to accommodate the proprietor of an average holding and his family and to harbour his cattle and his grain. A larger proprietor, however, requires in addition one or more cattle-sheds and barns or combined cattle-sheds and barns. These are sometimes like houses on a small scale and often develope in time into dwelling houses : sometimes they are of distinctive build entirely open in front so that the gathered corn may benefit by the wind and yet be protected from the rain. Nearly every house has several bee-hives let into its walls in the shape of square boxes with an orifice on the outside of the wall for the bees to come and go by and a moveable lid or door

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on the nside by means of which the honey is extracted. Mention must also be made of the *tenta* or flat-roofed house which is commonly used for human residence near Bajaura and Sultanpur and for cattle sheds almost everywhere in Kulu. These are always one-storeyed. No skilled or expensive labour is required for the construction of a house. Such timber as is necessary a landed proprietor is entitled to obtain at low rates from the forest and he cuts it up in the forest alone or with the help of some friends; other friends help to carry or drag it thence to the village and their only recompense is their food when so employed and similar assistance for themselves from the house-builder when they require it. The only labourer who receives a cash wage in addition to his board is the mason or *tháwi* and he is generally content with a fee of Rs. 20 or Rs. 30 and a new suit of clothes. Houses sell at prices varying from Rs. 100 to Rs. 300. In Upper Kulu the villages are few and large: in Saráj they are smaller and more numerous. The higher sites in a village used to be appropriated by the higher caste residents, but this custom is not now at all universally observed.

Sultánpur.

At the junction of the Beas and Sarvari is situated Sultánpur,* on the north bank of the Sarvari. Originally the capital of the kingdom of Lag, it was taken from Jog Chand by Rája Jagat Singh of Naggar and Makráhar, and made the capital of the Kulu State. Jog Chand was decapitated at a spot near the palace which is still marked by a stone pillar. In 1820 Moorcroft described it as an insignificant village, but now it contains about 3,000 inhabitants. The bazar is built in the old moat of the castle which cuts off the end of the tongue of land which projects at the junction of the rivers: a similar work is to be seen below Baragráon village opposite Naggar. On the peninsula is situated the palace of the Rái of Rúpi, a descendant of the Rájás of Kulu, and the temple of Raghúnáthji. Nothing is now left of the old walls but foundations here and there. The town was much damaged by the earthquake of 1905. There are several outlying portions of the town. Nawashahr on the west, Sarvari by the river of that name, Dhálpur on the south bank, and Akhára on the Beas northward of Sultánpur. The name Akhára means a place of religious mendicants, as it originally was; it now has more shops than Sultánpur and wider streets, this suburb forms the winter quarters of a considerable colony of Láhulas, who here seek a refuge from the rigours of their native climate. On the Dhálpur *maidán* south of the Sarvari are situated the Kulu tahsil, thána, hospital, veterinary hospital,

*For the origin of the name see page 28.

sub-jail, sarái, post and telegraph office, dâk-bungalow and civil rest-house. The maidán is a long piece of grassy plain on which is held the Dasehra and other fairs.

Naggar is 13 miles north of Sultánpur, on the left bank of the Beás, at an elevation of about 5,780 feet. It was originally the capital of the Kulu State (after Jagatsukh), being founded by Visudh Pál, and the Rájás lived here till Makráhar was rebuilt by Bahádur Singh in 1535 A. D. The village is clustered round the castle and contains eight temples, in which there is much good stone carving, particularly in the temple of Shiv and the old ruined shrine of Deota Guga. In a piece of ground near the castle are many stones set up to the Rájás and their widows, bearing rough carvings of faces and ornamentations. The castle is a large building consisting of two courtyards on the upper ground level and another storey below on the north side, and overhanging a lawn and garden with grand views up and down the valley. It was taken over from the Rái of Rúpi in 1857 in the time of Major Hay for quite a small sum, as it was in an almost ruinous condition. It was converted into a residential house, being at first occupied by the Assistant Commissioner and now used as civil rest-house, with court and offices for the Assistant Commissioner. The stones are said to have been brought by Rája Sidh Singh from Baragarh fort, on the bluff which stands at 10,000 feet height across the Beás valley. But there are old ruins called "Thawa" near the temple of Thákur Murli Dhar where the old palace is believed to have stood. The Assistant Commissioner and Forest Officer have bungalows at Naggar and there are also the offices of the Forest Officer and Assistant Engineer, with a post and telegraph office, King Edward Memorial Sarái, and four privately owned bungalows.

DISEASES.

Diseases.

Kulu has hitherto been absolutely free from plague, perhaps owing to the temperate nature of the climate and the isolation of the country. The description given above of the character of the village sites and houses shows that though the sites are often well situated and the houses good, the personal habits of the people are insanitary. Their clothes are seldom washed and the same thick woollen garments are worn winter and summer. There is also very little bathing. The widespread cultivation of rice in the close narrow valleys is responsible for much malaria and the fevers are generally of that character. To this may be traced the strong belief that exists in the efficacy of quinine for each and every ailment. Malaria is often very severe and widespread. So is a fever called "*pit,*" a bilious fever, which attacks the highland dwellers when they

Diseases.

come down to the lower valleys in the summer. Among the chief disease of the alimentary canal is round-worm which is very common especially in the Lag *iláqa*. Dysentery prevails all over the valley in some years, particularly in the summer, when it sometimes assumes an epidemic form and carries off numbers of children. Goitre is fairly common and is due apparently to drinking unboiled water taken from *kúhls* and nullahs. Syphilis, gonorrhœa and soft chancre are common. Ignorant treatment of women at childbirth is responsible for much suffering and mortality and is a strong check on the natural increase of the population. Typhus fever is by no means rare and more common in the highland villages. It is known as "*chameri*" and sometimes takes epidemic form. Skin complaints are prevalent all over the sub-division owing to the absence of personal cleanliness. At the hot springs there are much less of these diseases owing to the opportunities for bathing. Small pox, phthisis and leprosy are not unknown. Famine has never visited Kulu.

MARRIAGE AND OTHER CUSTOMS.

Forms of marriage in Kulu.

Though early betrothals are common, marriage does not often take place until the parties are of an age to cohabit. The betrothal ceremony is a simple one; a visit from the father of the boy to the father of the girl with some little presents, and an exchange of promises, the girl's father agreeing to part with her in consideration of receiving a certain sum of money from the boy's father. The marriage ceremony is more elaborate, but may be and is very much curtailed on occasion, and it is difficult to say what are the essential parts of it. The bridegroom usually goes with some relatives and friends to the bride's house to escort her to his father's house. The bride's parents have a feast ready for them, but do not often go to the expense of killing a sheep or goat for it; if the distance is too great for the party to return with the bride the same day, they spend the night at the bride's parents' house. Before they start on their return journey the girl receives a present of articles of jewellery from the groom. Worship of Ganesh is sometimes performed at the bride's house before the departure of the bridal party, the *parohit* of the girl's family officiating and the young couple being the only worshippers. On arrival at the bridegroom's house worship of Ganesh is repeated, but the officiating Brahman is this time the *parohit* of the groom's family. Another ceremony performed at both houses is called *lai lái* : the young man's plaid is tied in a knot with the bride's *dopatta* and the

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two garments knotted together are carried round the altar on which the worship of Ganesh has been celebrated. A vessel of water is consecrated and the *bálu* or nose-ring (which corresponds to the wedding-ring among Christians) is solemnly purified. The young couple and the guests, or at any rate the members of the bride's escort, receive the *tíka* mark on their foreheads generally from the hands of the bride. Then follows the marriage feast, for which a goat is slain in sacrificial fashion by a specially selected guest, and a present of goat's flesh is sent to the *negi* or headman of the *kothi*.

Relations between the sexes.

Polygamy is more common than would appear from the Census returns of 1891, which show only 1,090 married women for every 1,000 married men (excluding widows and widowers), because polyandry is practised in places, but still it is the exception rather than the rule for a husband to have a plurality of wives. The Kulu woman rules her husband and she likes to rule alone. It is a very common proceeding at a betrothal to bind the future bridegroom by a written agreement not to take another wife unless his first proves barren or becomes maimed. Armed with such a document, and fully conscious of her value to her husband as a field worker and a domestic drudge, as well as a mother of children, the woman is mistress of the situation, for if her husband proves distasteful to her, there is nothing to prevent her from eloping with a handsome neighbour more to her fancy, and there is no lack of bachelors* ready to tempt her whom the free open-air life of the hill people gives her plenty of opportunities of becoming acquainted with. It is true the injured husband may set the criminal or civil law in motion against them, but if he does, one of the three neighbouring Native States, Mandi, Suket or Bashahr, offer the runaway couple an asylum where there is no extradition in such venial matters. Usually, however, the husband takes the matter philosophically and for a consideration, varying from Rs. 30 to Rs. 100, yields up his right to his wife to the seducer and seeks a fresh mate elsewhere. In the Lag *iláqa* the sum rises to as much as Rs. 500.

Chastity, in short, if regarded as a virtue at all, is by no means considered a duty. Widows and even unmarried women who have not been given away in marriage in their youth by their parents are very much averse from shackling themselves with marital ties. They are fickle in their affections and knowing the facility with which, owing to their usefulness as workers

*Single 5,091, married 4,428, widowers 486, per 10,000 males (Census of 1891). There are no statistics available for 1911.

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in the fields, they can find protectors and employers from time to time, they prefer entering into temporary alliances which can be shaken off at will to going through the ceremony of marriage which is binding for a lifetime. A widow who has inherited a life interest in her husband's property is the less anxious to change her condition in that by marriage she forfeits the property, whereas Kulu custom offers no objection to her taking a partner to live with her so long as she does not marry him or leave her deceased husband's house. A widower, on the other hand, has every inducement to marry again ; he married originally because of the necessity of a wife to till his land, and the necessity continues after he has become a widower, while it is his interest to bind the mate he takes unto himself in such a way that if she leaves him he can at least by setting the law in motion obtain some compensation. While the number of widows therefore is 1,404 per 10,000 females, the number of widowers in each 10,000 males is only 486. In the Sarvari valley it is common for a bridegroom elect to serve for his wife when he or his father is unable to pay the consideration fixed at the time of the betrothal. He contracts to work as a farm labourer in his father-in-law's house for a period of three to seven years, at the end of which the marriage ceremony is performed though it has generally been anticipated with the full consent of the parents.

Polyandry is common throughout Saráj, and in parts of Wazíri Rúpi, and is the rule among the inhabitants of the isolated Malána glen in the Kulu tahsil. These localities are the most congested in point of population in Kulu Proper, the grain produced in them is insufficient to afford food to the people, and a certain amount of corn has to be annually imported into them, so the practice may owe its origin to prudential reasons. If so, it may be doubted whether it will ever disappear. It is also doubtful whether, as has been asserted, the people are at all ashamed of it ; they certainly are at no pains to disown the existence of the custom when questioned about it. It has been well described by Sir James Lyall as "a community of wives among brothers who have a community of other goods." If the brothers and their joint family after them remain in community the question of succession presents no difficulty, but if any of the brothers or any of the sons wishes to separate his estate from that of the others a puzzling problem may be raised for solution by the Law Courts. The rule governing such cases according to custom has been variously stated. It has been said that the woman is considered the wife of the eldest brother, and all the children are considered his children. According to another account the woman is allowed to state which brother is the father of the child, and the succession is in accordance with her allega-

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tions. But the rule of inheritance which seems to be generally accepted is that of three or more brothers who possess one wife in common, the eldest is deemed the father of the first-born son, the second brother the father of the next born, and so on, so much so that even where there was strong reason to believe that the paternity was otherwise, this rule has been known to be adhered to.

Inheritance through the mother.

The rules of succession in an ordinary family were stated as follows by Mr. Lyall in 1871, and the cases decided by the Courts since then have not brought to light any change in the local custom :—

"The children of a Brahman and Rájpút by a Kanet wife are called Brahmans and Rájpúts ; the term Ráthi is often added as a qualification by any one pretending himself to unmixed blood. In the absence of other children they are their father's full heirs, but in the presence of other children by a *lari* wife they would ordinarily only get an allotment by way of maintenance, put by some at one-fifth ; but the limit seems rather vague in practice. The rule of inheritance in Kulu among all tribes at the present day is *pagvand*, or, as it is here called, *mundevand*, that is all legitimate sons of one father get an equal share without reference to the number of sons born of each wife or mother. Among the Kanets and the lower castes the custom hitherto has been that every son by a woman kept and treated as a wife was legitimate. It was not necessary that any ceremony should have been performed. If no one else claimed the woman, and she lived with the man as a wife, the son born from such cohabitation was legitimate. In the same way among the same classes a *pichlag*, or posthumous son (called *ronda* in Kulu), born to a widow in the house of a second husband is considered the son of the second husband ; and a widow cannot be deprived of her life tenure of her husband's estate for want of chastity so long as she does not go away to live in another man's house. It appears to be a general idea in Kulu that a father could, by formal deed of gift executed in his life time, give his estate to a daughter, in default of sons, without consent of next of kin. It is doubtful also whether a distant kinsman (say more than three or four generations apart) could claim against a daughter without gift, and it seems sometimes allowed that a *ghar jowái*, or son-in-law taken into the house, becomes after a time entitled to succeed as a kind of adopted son without proof of gift."

Female infanticide.

There is no female infanticide practised as such in Kulu : a daughter has a value. But there is much mortality among infants owing to neglect.

LANGUAGE.

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Language.

In the Linguistic Survey of the Punjab and its Dependencies are described several distinct families of languages, two of which are represented in the Kulu and Saráj tahsils, namely the Indo-Aryan and the Tibeto-Burman. The Paһári tongues are placed in the Northern group of the Indo-Aryan family, distinct from both Punjabi and Hindi. In this group there are three separate languages of Western Pahári, which are known as Kulúhi, Kángri, and Sirmúri. Kulúhi contains only two dialects, Kúluhi or Koli and Mandiáli-Pahári. The latter dialect is spoken by a very small section of the population of Mandi State, and the former is peculiar to the Kulu tahsil. Kángri is spoken in the rest of Mandi, in Kahlúr, and in Kángra. Sirmúri, the third of these separate languages, is spoken in Saráj and in the hills south of the Sutlej, and contains seven dialects, one of which is peculiar to the Kulu Saráj.

This linguistic classification reflects the political and social history of the tract with which we are here concerned. The Kulu State has always been isolated from Kángra and for seventeen centuries is known to have been quite separate from Saráj. The Sarájís have always had relations with the inhabitants of the Simla Hills, but this connection was never so close in the case of the Inner Sarájis whose tongue displays marked variations from that of Outer Saráj. The people of Kulu tahsil speak a language which, except for a small extension in a tract which geographically belongs to the valley, is distinct from any other. The dialect of Saráj, on the other hand, is sister to six others of the same language. Within the tahsils, again, the natural divisions into valleys and glens is responsible for variations in grammar, in vocabulary and in pronunciation from wazíri to wazíri, while in the more remote regions of the Upper Párbati and the Malána rivers a new factor of racial difference comes into prominence.

The people of Kanáwar Kothi in the Párbati valley must once have belonged to the same race as the Kanáwarís of Bashahr State, and they still preserve many words of the language spoken by the latter. Their method of speech and gesture are also similar, and resemble those of Malána. The Malána language is called Kanáshi and though it has not received the same scientific treatment as the Láhul languages, enough is now known of Kanáshi to prove that it belongs to the group of languages in which the other members are Bunan, Tinan, Manchat, and Kanáwari. It is a mixture of Mundari and Tibetan and shows that the ancient aborigines of India amalgamated with a Tibetan tribe in Malána as they did in Láhul. The peculiar tribal

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organisation of Malána shows, however, that the isolation of this canton in its circle of formidable mountains took place in very remote times.

TRIBES AND CASTES.

Tribes and castes.

The population consists almost entirely of Kanets and Dágís, with a small admixture of Brahmans.

Kanets.

The Kanets are the cultivating class of all the eastern Himalaya of the Punjab and the hills at their base, as far west as Kulu and the eastern portion of the Kángra district, throughout which tract they form a very large proportion of the total population. Beyond this area in Kángra proper, their place is filled by Ghirths. The country they inhabit is held or governed by hill Rájpúts of prehistoric ancestry, the greater part of whom are far too proud to cultivate with their own hands, and who employ the Kanets as husbandmen. The whole question of their origin is elaborately discussed by General Cunningham at pages 125 to 135 of Volume XIV of his Archæological Reports. He identifies them with the Kunindas or Kulindas of the Sanskrit classics and of Ptolemy, and is of opinion that they belong to a race, known by various names, which, before the Aryan invasion, occupied the whole Sub-Himalayan tract from the Indus to the Brahmaputra, and which, driven up into the hills by the advancing wave of immigration, now separates the Aryans of India from the Turanians of Tibet. The Kanets are divided into two great tribes, the Khásia and the Ráo or Ráhu, and it is probable that both are really descended from intercourse between the Vaisya Aryan immigrants and the women of the hills. The distinction between Khásia and Ráo is still sufficiently well marked. A Khásia observes the period of impurity after the death of a relation prescribed for a twice-born man; the Ráo that prescribed for an outcaste. The Khásia wears the *janeo* or sacred thread, while the Ráo does not. Further west, in Chamba, the place of the Khásia and Ráo Kanets is taken by Thákurs and Ráthis, who however are probably of purer Vaisya Aryan blood. The Khásias, like the Thákurs in Chamba, were probably promoted to a better caste position by becoming in the first instance local leaders or headmen. But the distinction is breaking down, except in Wazíri Outer Saráj, the inhabitants of which, both Kanets and Brahmans, are much stricter observers of caste than the people of the higher hills, and of the northern part of the sub-division.

The Kanets are exclusively agriculturists and shepherds. When asked their caste they as frequently reply *zamíndár* as "Kanet." They are industrious and thrifty cultivators. Those

who live towards the bank of the Sutlej are of a somewhat different type from the men of the Beas valley; they are more manly and independent, but at the same time more indolent than the latter, and more observant of caste ceremonies and customs than even the Hindús of the plains. They are sober as well as thrifty, and it is only in the three *wazírís* at the head of the Beas valley that drinking is indulged in.

Kanets.

The Kanets of Malána have more refined features than those of the rest of Kulu, which may be due to a separate origin, or to continual in-breeding. They have not been scientifically treated by any anthropologist, but their language has been carefully studied, and points to a mixed aboriginal and Tibetan source.

Rájpúts.

The Rájpúts in most places differ but little in character from the Kanets, but those of Wazíri Rúpi and of Saráj, who are the descendants of *wazírs* and retainers of Kulu Rájás, are of a better class, and are highly respected.

Brahmans.

The Brahmans also are scarcely to be distinguished in appearance from Kanets, but their caste absolves them from taking part in any irksome kind of labour; and though most of them have no scruples against following the plough they are an idle lot. Those of Outer Saráj, and especially the Brahmans of Nirmand, a large village with several temples of note, are, like the Kanets of that part, stricter Hindus than their caste brethren in the higher hills, but they are lazy and extravagant in the extreme.

Bairágís.

The members of the Bairági caste in Kulu have now little claim to be considered a religious sect. The original Bairágís in Kulu came from the plains, but the present men are mostly descendants of Kulu Brahmans or Kanets who became their disciples. The immigration of this sect took place in the time of Rájás Jagat Singh and Mán Singh, who in their pious moods bestowed assignments of land on a number of Bairágís who had come to Kulu and brought images (*thákurs*) with them. Many of these assignments are still maintained, but the images have little, even local, celebrity, and the Bairágís scarcely differ from ordinary agriculturists. Rája Tedhi Singh employed Bairágís as a body-guard, but they now display no military instincts or traditions.

Gosáíns.

The Gosáíns of Jowálamukhi were for many years in the habit of visiting the Saráj tahsil for the purchase of opium and blankets there. Many of them have now settled down permanently and acquired land: they have intermarried with the Sarájís, but are still a distinct, though not a religious, caste. They have made their position very strong by means of money-lending and their

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Gosáins.

influence prevents the popularisation of *takkávi* loans and co-operative banks. They charge high interest, their accounts are often false, and they sometimes practically enslave their debtors. There are some families of Gosáins in the Kulu tahsil, but their immigration is of older date than that of the Saráj settlers, and they are even dropping the title "gir," which for many years was the only feature distinguishing them from Kanets.

Náths.

The Náths are Dágís with their ears pierced, holding a position like that of the Sádhs among the Kángra Gaddís; they are the descendants of some religious mendicants, but are now much like other people of their grade. It is a native saying about Kulu that no man who takes up his abode there retains purity: the Brahman or Rájpút marries a Kanet girl, and does not pass on the pure blood to his sons: the ascetic sooner or later takes some woman to live with him, and found a family. All such people have found that they could do what they liked in Kulu without serious loss of reputation, and being few in number and scattered here and there among the Kanets and Dágís, they have speedily succumbed to temptation.

Intercourse between the castes.

Brahmans belonging to Kángra families, but living in Sultánpur, do not intermarry with the village Brahmans of Kulu. If any such marriage takes place the offspring is considered, as among the Kángra Brahmans, illegitimate, and not of pure Brahman blood. These impure Brahmans will, however, marry with the village Brahmans. Khatrís from the plains will take wives from the Khatri families living in Kulu, but will not give their daughters in marriage in such families. The traders who come to Kulu do not enter into regular marriages, but take Kanet women to live with them as concubines. The children of such a union are said to be of the same caste as their fathers, just as the son of a Rájpút in Kángra is called a Rájpút, though his mother was a Ghirth or a Gaddin.

The menial castes.

The majority of the impure or low caste people were returned at the census of 1891 as Dágís in the Kulu tahsil and as Kolis in Saráj. The two names appear to be synonymous except that the latter is preferred by the members of the caste themselves, as its meaning conveys no reproach, whereas the popular derivation of the word Dági is from *dag*, 'cattle,' implying that they have no scruples about touching the carcasses or eating the flesh of dead cattle. Another derivation of the word is from *dagna* 'to fall': 'one who has fallen.' The Kolís of Kángra will not have intercourse with the Kolís of Kulu on equal terms; the latter admit their inferiority, and ascribe it to their being defiled by

touching flesh. The terms Koli and Dági seem also to be synonymous with the Chanál of Mandi State and of the Kángra valley, and with the "Kolarian" aborigines of India. The Kolís of Nirmand like the Brahmans of that village arrogate to themselves a higher status than is claimed by their fellows elsewhere. As agriculturists all are notoriously lazy, ignorant and thriftless. In dress and customs they do not differ materially from Kanets, except that they are generally poorer, and have no caste scruples. Each family is attached to a family of Kanets, for whom they perform the customary menial services on the occasion of a birth, a marriage or a death, receiving in return the leavings of the ceremonial feasts, and also certain allowances at harvest time; this relationship is known as that of *Kasain* (the Kanet) and *Dhanihdru* or *Kholidar* (the Dági).

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The menial castes.

The higher and lower castes are further distinguished by the names *Mitarka* and *Barkha*. The latter term includes in addition to the Kolís or Dágís various menial castes which, though they are all very much on a level from the point of view of a Kanet, recognise important gradations among themselves. They are reckoned in the following descending order: (1) Tháwi, (2) Darehi, (3) Koli or Dági and Barehi, (4) Lohar and Bárra, (5) Chamár. Tháwís are masons and rude carpenters; Darehís are professional swimmers, who make use of inflated buffalo skins to help them in ferrying passengers across rivers, or in relieving a block of logs floated down-stream by the Forest contractors; Barehís are axemen who fell trees and prepare timber for the Tháwi; the Lohárs are both blacksmiths and iron-smelters, and the Bárras (or *Barras*) manufacture baskets from the hill bamboo (*nirgál*); the Chamárs, as elsewhere, are tanners and workers in leather. Wool-cleaners are known as Poomba.

Alienation of Land Act.

The tribes notified as agricultural under the Alienation of Land Act are, for Kulu and Saráj tahsils:—

Brahman (indigenous to Saráj).

Dági.

Kanet.

Koli.

Rájpút.

Thákur.

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Statement showing ownership of land by castes with area in acres.

The dates are those of the last two settlements.

Name of caste.	Total cultivation in each assessment circle.						Percentage of whole cultivation held by each caste.					
	Kulu Proper.		Rúpi.		Saráj.		Kulu Proper.		Rúpi.		Saráj.	
	1891.	1912.	1891.	1912.	1891.	1912.	1891	1912.	1891.	1912	1891.	1912.
Brahman ...	1,692	1,667	633	601	2,338	2,408	6	5·7	6·2	6	6·6	6·2
Rájpút	618	619	485	688	436	503	1·5	2	4·8	6	1·2	1·8
Kanet ...	15,960	16,271	5,351	5,839	21,341	23,865	57·4	59	52·8	50·5	60·2	63
Súd, Mahájan, Khatri	449	418	309	258	37	82	1·6	1·4	3	2·2	·1	·2
Artizans of all sorts	518	499	201	273	1,062	1,220	1·5	1·7	2	2·3	3	3
Koli, Chamár, sweepers, etc.	2,101	2,087	733	946	3,903	4,640	7·5	7·2	7·2	8·2	11	12
Remaining Hindús with deotas.	5,071	5,591	2,395	2,839	6,270	5,596	18·2	19·2	23·6	24·6	17·6	14·5
Musalmán ..	67	71	14	2	1	0	·2	·2	·1	...	...	...
European ...	1,407	1,709	...	...	43	...	5·4	5·9	...	...	·12	...
Native Christian ...	...	...	...	...	20	73	...	...	...	...	·06	·79
Common and Government land.	16	6	2	0	4	6	...	...	...	...	...	...
Total ...	27,784	28,938	10,123	11,526	35,454	38,303	...	...	...	...	...	...

CHARACTER OF THE PEOPLE.

Character of the people.

In attempting to describe the character of the Kulu people certain preliminary reservations must be made. It is impossible to take into account here the innumerable differences due to caste, to the sundering influence of hill and dale, and to varying degrees of education. The writer is not of their nationality, he has not lived in their houses, nor even spent many years among them: the people, as in other countries, appear in a different light to each observer, and may be they are what one makes of them. Certain general characteristics, however, may be deduced from observation of their customs towards outsiders and each other.

The Kulu people are as a rule suspicious of strangers, having lived for centuries in a remote country, which has some resemblance to the "hermit" kingdoms. They are, however, invariably polite to Europeans, for whom they have much respect. To each other they are courteous and sociable, and it comes as a surprise to the visitor from the plains to see a man stoop to touch a woman's feet in salutation. This greeting is a sign of respect toward seniors and is done by both sexes to each other. There is also the pretty custom of taking cakes "*páhuṛ*" in the early spring to the married sisters of the family, to keep up old acquaintance; and this is universal in Kulu and Saráj. The bride too is made to feel more at home in her new surroundings by being attached by the rite of "*dharmohára*" to a member of a family, whether man or woman, which is on friendly terms with the husband's family. There is no doubt that the people have kindly instincts and that they love pleasant social life. They

Character of the people.

are most amenable to authority, if exercised with tact and good manners, and dislike nothing so much as abuse or rough treatment.

As regards intelligence and culture the majority do not belong to a high order of civilization, and they have the faults and the virtues of their position in the scale. They are usually most ignorant and uneducated, and because they are so they are sometimes cruel and neglectful towards the helpless, both of man and beast: they do not however seem to be hard-hearted. They are not so clean in their persons as the Kángra people, but are better in this respect than their neighbours on the east and north. They have no long-headed business instincts, as have the Láhulas, and while they display cunning in petty barter and cheating they have little enterprise and industry. They feel their own impotence in the presence of unknown forces which they cannot fathom, have a blind faith in the power of their *deotas* to work them harm, and are full of all sorts of superstitions: but in time of drought they will turn on their gods in a sort of childish petulance for refusing the rain. Similarly they submit to oppression without complaint if exercised by any one whom they believe to be powerful and unscrupulous: either because they lack moral courage, or because they fail to see far enough to where their true interest lies. Their courage is not of the martial sort, as they have no idea what military service means, having never been recruited in the past: but they are brave enough in face of the dangers of the forest which they know. Yet if they had their own way they would burn down all the forests whereby they live. The social system is kept up by the rules of caste, by the numerous visits paid by *deotas* to each other accompanied by their people, and by gatherings on occasions of joy and grief. Discipline is enforced by the *banj* or social and religious ban, and by the less formal *uggu*, or withdrawal of social relations. The *banj* is rarely employed without good reason, but sometimes it enables a man to get rid of an inconvenient wife. A great many disputes are settled by *pancháyat*, especially in the upper Párbati valley.

That they have imagination is shown by many of their legends and fairy tales, which contain as much of that quality as any in the world. Their sense of the picturesque is proved by the situation they chose for their temples, by the wild stories they attach to each cave, lake, frowning cliff, rugged rock or water-fall, to explain the impression which its form produces on their minds. They are very fond of music. The tunes, which are quick and lively, remind one of Irish jigs or Scotch reels. The women sing a great deal, and rhyming songs are made at each

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Character of the people.

marriage or funeral, or in commemoration of any remarkable event. Their instruments are primitive and consist of the pipe (*saná*, *sanai*), the drum (*ḍhol*), cymbals (*chhâne*), a long curved trumpet (*narsinga*) and a straight trumpet (*karnál*). They love flowers and wear them whenever they can : their jewellery is of silver and enamel, in pretty shapes and colours : they wear very good and picturesque clothes at social gatherings where the combination of black velvet or woollen head gear, marigold flowers, and silver ornaments, over black-and-white check plaids, is most effective. Their tastes as regards colour are restrained and simple.

They are sometimes accused of laziness and waste of time in fairs and dances, but a close acquaintance with their yearly round of labour leads one to the conclusion that they put in a fair amount of work in one way or another. Besides the ordinary tasks of ploughing, sowing, and harvesting up and down steep hill sides there is weaving for the men in the winter, and carrying of wool from Akhára, salt from the Mandi mines, and even grain from long distances. Sheep and cattle are stall-fed, often for several months, in the winter. Houses must be built or repaired, involving much hard work in the forest and quarry. The flocks in the lower Hill States and in the alpine pastures must be supplied with salt and the shepherds with food. Roads and bridges are made or repaired ; heavy logs for bridges are dragged down steep sides with much labour and risk to the workers. The women have field-work in addition to their domestic duties, and carry loads of grass and grain with the men. In addition there is the continual demand for porterage of travellers' luggage on the roads. The want of labour-saving devices (such as wheeled traffic) makes it impossible for the people to be really idle. The one advantage as regards labour enjoyed by the Kulu women as compared with their sisters of the plains is that they need do no grinding of corn : that is all done in water-mills.

The people are neither litigious nor thievish, except perhaps in the Sarvari valley. Nor are they addicted to drink in Saráj and Rúpi, as a rule : in the Beas valley they share this fault with many other hill-tribes and there can be no doubt that it leads to much immorality.

Altogether they are a most lovable people who are well worth their place in the sun : what they need is a larger acquaintance with the outside world and a fuller opportunity of realising their position in the Empire, and the need of bringing themselves to a higher level of morality, education and social betterment.

RELIGIONS.

Religious.

The whole population is returned as Hindu, with the exception of—

Musalmáns	...	...	...	903
Christians	...	...	...	117
Sikhs	...	...	...	55

The Musalmáns are strangers from Ladák of Bálti race, Aráin immigrants from down country, and Patháns who have strayed here for trade. These are settled between Akhára and Shamshi. The Christians include English officers and fruit planters and their families and some three score natives settled at Ani in Outer Saráj by Dr. Carleton of the American Presbyterian Mission, which has given place to the Salvation Army. The Sikhs are chiefly Government officials and their families.

Hinduism.

Hinduism has proceeded in Kulu, as in the rest of the Himalayas, by importing the Hindu deities proper, with the style of temple architecture prevalent in the plains, and also by assigning to Hindu deities the local spirits and godlings found among the hill tribes. The early legends speak of one Makar as being an abstainer from cow's flesh : he founded the town of Makarsa or Makráhar which was for a long time the capital of the Kulu State, and it seems that Hinduism must have come into Kulu at a very remote time. Buddhism also made its way here and there are still one or two traces of it. But the prevailing religion now is the aboriginal worship of nature dressed up in Hindu forms.

Present day worship.

The Rájás of Kulu came originally from Hardwár and they imported gods from the plains, whom they installed in Kulu with grants of land. These are very numerous. The tenants of the gods are made to render certain services to their landlords and are thus bound to them by strong material ties. But if the people are questioned as to their private worship, they will say that they render dues to the Thákurs and other big foreign gods but for every day wants and troubles they go to their nature deities. The only god from the plains who is really popular is Nárain, an aspect of Vishnu. The saying is "*athára* Nág, *athára* Nárain" which may be translated—"There be Nágs many and Náráins many" (the number eighteen being commonly used to mean a large number).

Nágs and Nárain.

The Nágs are essentially aboriginal snake gods, the spirits of the springs and rivers, and they exist in large numbers in Kulu. They are thus contrasted with Nárain who came

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Nágs and Nárain.

from the Punjab to Kulu. Nárain predominates in Kulu tahsil and Nágs in Saráj. The saying quoted above contains one fallacy, namely, that there are different Nárains: the god Nárain is really one, a form of Vishnu, and though he has many shrines, he never takes different forms: the Nágs on the contrary are separate personalities. They are descended from Básu Nág, the father of all Nágs, whose temple is at Kamhárti in Kothi Naggar with others in many of the Himalayan districts. The story of the birth of the "eighteen" Kulu Nágs is told as follows:—One day at Ghúshál village, north of Manáli, a beautiful woman was on the roof of her house, when she was carried off by Básu Nág; he kept her in concealment (after the usual Kulu manner), until one day, when the Nág was asleep with his head in her lap, she remembered that it was 3rd of Assuj and that there would be a dance and a fair at Ghúshál and that the old folks would be there, so she wept and her tears woke up Básu Nág. He told her not to worry, but if she wanted to go home he would place her there at once, but she would give birth to eighteen Nágs, whom she must feed daily with milk, and burn incense to them. She agreed to this proposal and things turned out as the Nág had said. She stayed at home and gave birth to the Nágs and attended to them as directed, keeping them in an earthen pot. But her daughter-in-law (there is some *hiatus* here in the story) was inquisitive, and when her mother-in-law was away, went with milk and a spoonful of burning incense to the mysterious pot. When the Nágs popped out to get at the milk, she took fright and dropped all she had in her hands and the Nágs escaped, but many were burnt by the fire. Dhumal Nág of Halán (Baragarh) is said to have broken the lid of the pot. Páhl Nág of Prini had his arm burnt: Jalsu Nág of Jalsa (Baragráon) became deaf: the Ghushali Nág was blinded and never left the village. Shargan Nág of Bhanara (Jagatsukh) had his head singed: Kali Nág of Raisan and Harkandhi was blackened by fire. This latter deity has a temple at Shirar and keeps up a perpetual feud with Narain; when his festival takes place at Shirar he has a great battle with Nárain on the ranges between the Beas and the Sarvari, and in the morning the hill tops and the deodár grove at Grámang are strewn with iron arrows. The cause of the quarrel is said to be the rudeness of Nárain to Káli Nág whom he found at his place at Jána in Kothi Naggar. Nárain shot the Nág, as an arrow, from his bow across the Beas valley and he fell at Shirar. Káli Nág is also said to have run off with Nárain's sister, but that is another story.

Relations with local dieties.

The tales about the *deotas* are indeed endless and this short account cannot contain more than a brief mention, showing

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No. 4. Car of Raghunathji.

how human are the relations of the godlings to each other and to the people. The deities are regularly awakened and taken out for air, and bathed; they are even supplied with tooth-brushes and food, and danced up and down on the village greens in company with their friends and relations. The continual exchange of visits of gods from village to village no doubt keeps up connection and friendly feelings between people who would otherwise drift apart separated by barriers of hill and dale. The godlings are usually tended by peasants without the intervention of any priestly caste, and they are very much localised, being generally named according to their villages.

Relations with local deities.

The principal gods of Kulu tahsil are Raghúnáthji, the imported god of the Rájás, Devi Hirmá or Hiramba, an aboriginal deity who populated the valley and assisted the Rájás to begin and to extend their rule, *Deota* Jamlu who has an independent position rather hostile to Raghúnáthji, and Devi Phungni who rules in the Sarvari valley. Rája Jagat Singh imported the Thákur Raghúnáthji *circa* 1650 A. D, and gave his kingdom to this god. The godlings of Kulu and Saráj are bidden to assemble at the Daschra fair annually, when the Thákur goes in procession along the Kulu *maidán*. This procession, however, begins only when Devi Hirmá has arrived, and her presence determines the course of the subsequent ceremonies. She is a very powerful Devi of Manáli and jealously punishes any trespassers at her pool of Beás Kund. She and Devi Phungni are supposed to grant rain. Deota Jamlu has several temples both in Kulu proper and in Rúpi and one or two in Saráj. His head-quarters are at Malána as described below. He is brother to Devi Prini of Jagatsukh and to Gyéphang Lhá of Láhul and his Tibetan origin is very plain. He insists on proper conduct on the part of people generally, and frequently fines other *deotas* whose people have been guilty of misconduct, and come to him in times of drought, etc. His *gurs* and *chelas* speak the truth much more than the ministers of the other *deotas*. Deota Grámang Nárain might here be mentioned as a god before whom none dare swear a false oath: also Bijli Máhadeo, a form of Shiv in Kothi Kais.

Principal gods of Kulu.

In Inner Saráj Singa Rikhi in Kothi Chaihni has great influence, but is inferior to Jamlu who has a temple at Kulári in Plách; Sakiran Rishi on the high ridge west of Jibhi is also much venerated by the masses but refuses all assistance in regard to giving of rain, which is the province of the Jogni Bajhári of the Jalori Range. Gara Durga of Gosaini near Bandal is a Devi whose story is a sad but beautiful one and rather like that in Kingsley's "Waterbabies." She was originally a lovely girl, the daughter of a Thákur of Dethua in Kothi Kot: a mason of Bandal did

Principal gods in Saráj.

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such good work for the Thákur that the Thákur promised him all his desire; he claimed the maiden and was allowed to take her away.

Principal gods in Saráj.

She went as in duty bound but found nothing congenial in the low-bred mason and as she sat by the river Tirthan near Bathád, the river drew her down into its cool depths, and she turned into a Devi.

In Outer Saráj the Devi Ambika of Nirmand is the most famous. She seems to be an aboriginal deity: her ceremony of the Bhunda, held every 12 years, is described below and is no doubt a survival of human sacrifice. The temple of Paras Rám at Nirmand also attracts many worshippers, and there are several temples of Mahádev at Shamshar near Ani which are much visited.

In general.

In general it may be said that the belief in their *deotas* is very real among the Kulu and Saráj people. They are less willing than formerly to attend the Dasehra fair owing to the expense and labour of a long journey especially at harvesting time. But they go to their *deotas* in all times of trouble and for their daily wants. The spread of education is perhaps killing belief to a certain extent, and the people are sometimes a little weary of *deotas* who give no benefits but only punish and threaten. But the services are continued owing to their conditions of land tenure and their love of social life. Their *deotas* do no doubt help to keep them up to a higher standard of morals than they would otherwise adopt, and will continue to retain their hold until ousted by a purer and higher religion.

Festivals

The occasions when the idol is animated by the presence of the god are celebrated by fairs and festivals attended by all the worshippers of the god and also by visitors from outside the village, so that the social life of the country is closely interwoven with its easy-fitting religion. The first appearance of the *deota* for the year is not earlier than the commencement of summer, about the beginning of Jeth (or middle of May), when the *rabi* crop of wheat and barley is ready for the sickle and the young rice is getting big enough to be planted out in the fields. The idol is carried out of his temple by the priests and attendants, and his band of musicians accompanies, blaring uncouth music from drums and cymbals and trumpets and is carried to the village green, where perhaps a few guests await him in the shape of idols brought from neighbouring villages with their escorts of attendants and musicians and worshippers. All the people are dressed in their best and profusely decorated with flowers; shopkeepers have set up gay stalls for the sale of sweetmeats, toys, and knick-knacks; and somewhere in the back-ground (if the fair is in upper Kulu) will be found tents where *lugri* and country

No. 5. Gods out for an airing, Manali.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, [illegible]

No. 5. Gods out for an airing, Manali.

Festivals.

pirits can be procured. The *deota* dances, oscillated up and own in his chair by his carriers who of course are under his ifluence, and sometimes one of his guest gods or goddesses dances longside of him, and the pair of them exchange grotesque bows ad caresses. The contagion extends to the men in the crowd or) such at any rate as are expert dancers: they join hands and rm a ring, the god and his musicians in the centre, and circle und with a graceful step, shouting the words of the airs which ie bandsmen are playing on their uncouth instruments. Faster id faster grows the dance as evening approaches; new dancers e always ready to take the place of those who drop out fatigued; id the merry revel goes on from early afternoon till dusk when ie idols return to their temples. The women with their gay ad-dresses form bright groups of spectators on the hillside close the green which is terraced into tiers of stone seats for their commodation. In the Kulu tahsil they scarcely if ever join the dance, but in Outer Saráj they form a ring separate from at of the men and in Inner Saráj sometimes they join the men id dance in the same ring with them But everywhere it is only e agriculturist classes, Brahmans and Kanets, who are admit-d to the charmed circles, low caste people are strictly excluded, id sometimes outsiders, even of the higher castes, if not worship-rs of the god, are not allowed upon the green.

Nearly every hamlet has at least one fair during the mmer, and as some care seems to be exercised to prevent ljacent hamlets having their festivals on the same day there an almost continuous succession of fairs during the summer onths. One of the largest is that which takes place at Banjar, e head-quarters of the Saráj tahsil, in May. It is the only one at hich business of any importance is transacted, and forms a arket for the sale of sheep and goats attended by butchers from mla and by Garhwálís and others who wish to buy goats as ıck-animals.

The god can, if necessary, be invoked on other than those ecial occasions. Thus at reaping time if an agriculturist ishes to propitiate him he causes the idol to be brought to his eld before the last load of corn is cut, and to be danced in the anner already described This ensures a good return of grain. f course, to secure this privilege, it is necessary to feast the tendants of the god.

Once a year there is a great parade of all the *deotas* of Kulu honour of the god Raghúnáth at Sultánpur, the ancient capital. ı olden days they were brought in by the express command the Rája, who seems to have been lord paramount of the gods

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as well as of the men of his kingdom, and this subservience of church to State still continues in the neighbouring independent State of Mandi. Doubtless it is based on the fact that the temples of the *deotas* possess endowments of land revenue which were held at the king's pleasure. The revenue of about one-seventh of the cultivated area of Kulu is alienated in this way, but now that it is held during the pleasure of the British Government the *deotas* are not so careful to pay their annual homage to Raghúnáth as formerly, especially if the time fixed for it, which nearly coincides with the moveable feast of the Dasehra, happens to interfere with the harvest operations of their worshippers. There is generally a fair attendance, however, the followers of each particular idol do their best to show to advantage, and every banner, trumpet and drum that is available is put into requisition. The fair goes on for nearly a week; and for several days before it commences all the roads leading to Sultánpur are thronged with gaily-dressed crowds of men, women and children, bearing in procession the god of their own hamlet. On arrival at the plain near the town encampments are formed, and shortly after the various adherents of particular shrines begin marching about, and parade all their magnificence as a sort of preliminary spectacle and foretaste of what will be done on the opening and the final days of the entertainment. The devotees attached to the Raghúnáth shrine have not in the meanwhile been idle, and by the morning, when the fair really commences, the *rath*, or wooden car, which lies in the plain all the year round, has been provided with wheels, and liberally ornamented with coloured cloths and flowers. All being ready for its reception the idol is placed on a species of seat inside the framework. All local deities are now brought up, with such addenda of pomp and music as are procurable, and are arranged round the central figure. The high priest then steps out in front, and with every appearance of extreme devotion prays to the god, and sprinkles water before the shrine; and the leading men of Kulu, headed by the representative of the old sovereigns of the country, walk rapidly three times round the *rath* amid the incessant bray of the trumpets and beating of cymbals and tom-toms. Stout ropes are next attached to the lower timbers of the *rath*, which is borne along for a few hundred yards by an enthusiastic crowd, preceded and surrounded by all the smaller gods, to a place where a canvas tent has been put up for the accommodation of Raghúnáth during the five days of the fair. During the next three days the *deotas* pay visits to one another, and otherwise occupy themselves, and the large green plain is covered with circles of men dancing round their idols in the same manner as they do at the local fairs already described,

and with groups of brightly dressed women from all parts of the sub-division. Towards dusk, when the worship of all the gods is celebrated simultaneously with the usual noisy accompaniments of drums and trumpets, the din is immense. Nor does night bring repose, for the broad harvest moon diffuses a light almost as brilliant as day, and the Sarájís. who are the best and also the most indefatigable dancers in the sub-division, carry on the dance even after their *deotas* have retired for the night. It is not till the small hours that the crowd gradually disperses, and the plain becomes dotted with sleeping figures wrapped in their blankets on the bare ground. On the last day of the fair the triumphal car of Raghúnáth is again brought into requisition to carry the idol escorted as on the first day by the *deotas* down to the top of the high bank overlooking the Beas; a buffalo and a few smaller animals (including a crab) are decapitated below on the margin of the river, and a figure representing Lanka is beheaded to celebrate the triumph of Raghúnáth (Vishnu) : then the car is dragged back across the plain as near as possible to the bank of the Sarvari stream, across which the idol is carried in a pretty little wooden palanquin to his temple in the palace of the old Rájás. By an early hour the next morning all the *deotas* with their followers have dispersed to their hamlets. When the fair falls as late as the middle of October (it varies between that date and the latter half of September) an additional interest is lent to it by the presence of picturesquely clad Yárkandís and Ladákís who have just finished their long journey from Central Asia with ponies and *charas*, silks and carpets for sale in the plains The large concourse of people enables these to do some trade on the spot, and a good deal of business is also done in the sale of shoes, brass and copper vessels, cloth and jewellery.

The god Raghúnáth makes another public appearance once a year when he emerges from his temples to be bathed in the Beas at the Pipal Jatra, which is held in April. The attendance at this, though fairly numerous, is not very large.

After the Dasehra few fairs are held in Upper Kulu, but some large ones take place in Outer Saráj in November. The largest fair of that *waziri*, however, is not annual but triennial, every fourth one, that is, the fair occurring at the end of each period of twelve years, being on a very large scale. It is held in honour of Devi Ambika. A curious custom in connection with it is the descent of a man down a rope suspended over a precipice. Under British rule the cliff down which the descent is made has been changed so as to reduce the danger attending the performance of the feast, but the Beda who has to slide down (it is the Beda caste which supplies the acrobat, and they regard it as a

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Festivals.

privilege) still takes care to manufacture his own rope. Custom requires that he shall make it on the village green at Nirmand, the hamlet where the fair is held, and shall fast from everything but milk and fruit while making it. During the night the rope is kept for safety in a hut made for the purpose, and care must be taken to prevent an unclean animal from touching it, such pollution necessitating the sacrifice of a sheep. The Beda is naturally careful to prevent rats from coming near it, for a gnawed rope might imperil his life, and he is allowed to have a cat with him in the hut.

At the religious festivals celebrated during the winter and spring the image of the *deota* is not, as a rule, produced. The chief of these is in the Kulu tahsil and is called Koli-ri-Diáli, but does not appear to have any connection with the Diwáli of the plains, and is celebrated not in November like that festival but some time in the latter half of December. During the evenings preceding it the men in each village meet on the village green and sing indecent songs till a late hour, when a chorus in honour of Devi Hirma is shouted, and then with three cheers given in English style all disperse to their homes. The men stand in a circle and dance slowly as they sing, and occasionally the circle whirls madly round, each men tugging his neighbour towards the inside or the outside of the ring till some one gets exhausted, and lets go, with the result that all are sent sprawling. On the evening of the festival lighted torches are shown at every house, in every hamlet up and down the Beas valley for an hour or two, and the effect is very pretty. The signal for the commencement of the illumination is given from the old castle at Naggar, which is one of the most central land-marks of the valley and is caught up at once by the villages on the opposite side of the valley, and flashed on up and down the valley and from side to side.

Temples and religious ceremonies.

The *deotas'* temples stand sometimes beside the village green, sometimes remote from any habitation, in a cedar grove, on a hill-top or near a lake or waterfall. They are picturesque structures built of stone and timber in the same manner as a peasant's house, except that the timbers are larger and more numerous, and almost invariably deodar; and sometimes the entire edifice is of wood. The forms vary considerably and have been described on pages 37 and 38. The interior is bare and unfurnished. Several out-buildings are generally attached to a temple; a kitchen for cooking meals on a feast-day or fair-day; a shed for sheltering *sádhús* and pilgrims; houses, sometimes, in the village for the priests and attendants; and a granary (*bhandár*), for storing the grain-rents of the temple
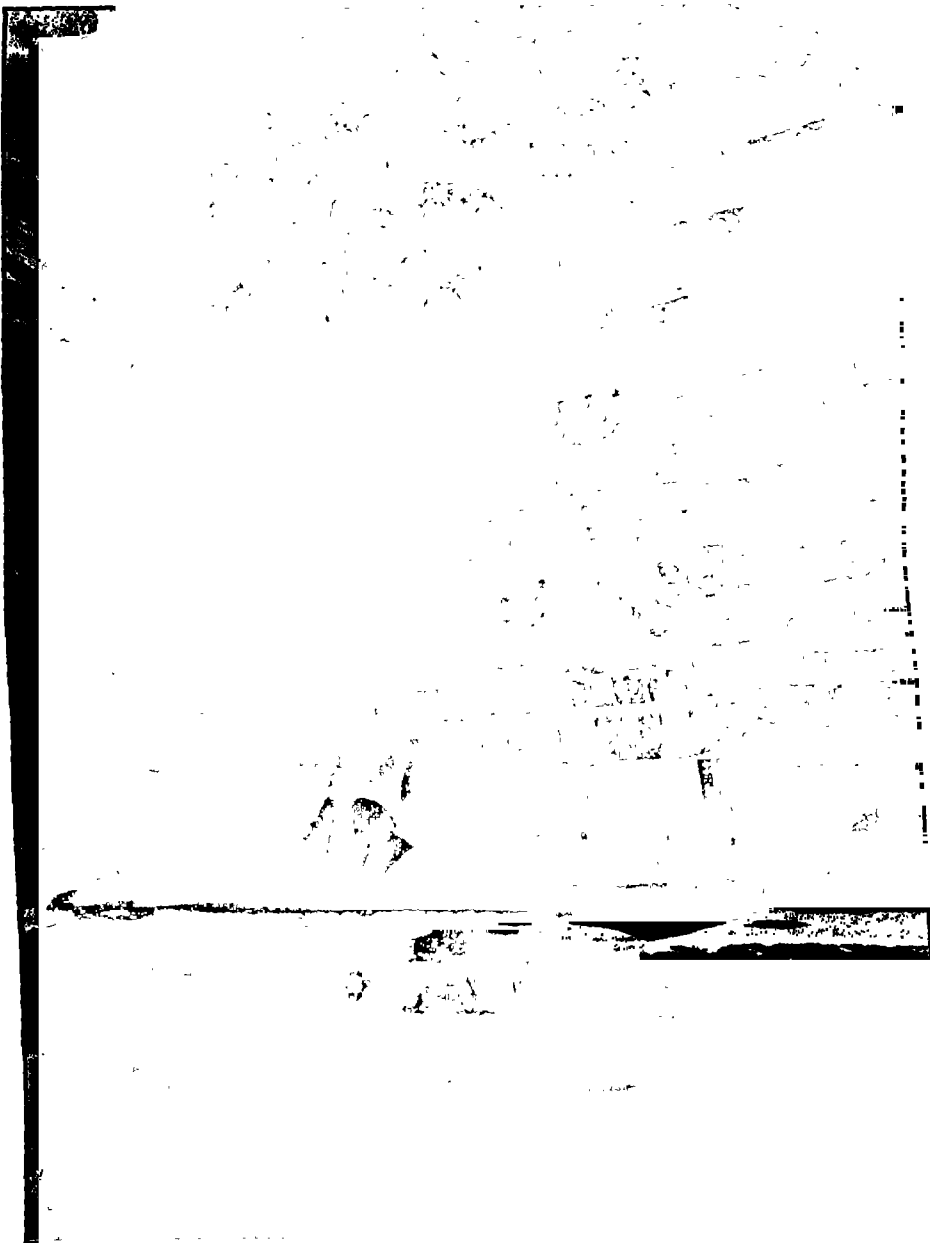
Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917.

No. 6. Hot Spring at Bashisht.

lands, in appearance like a substantial dwelling house. Some of the large shrines have large fixed establishments, a *kárdár* or manager, an accountant, one or more *pujáris* or priests, several musicians, several *gur* or *chelas*, *i.e.*, interpreters of the oracle, standard-bearers, torch-bearers, blacksmith, carpenter, florist, watchman, messenger, carriers of loads, &c., to all of whom *barto*, or land rent-free in lieu of pay, is assigned out of the temple endowment. Most have a *kárdár*, a *gur* and musicians. For some, one man is both *kárdár* and *pujári*, and musicians are called when they are wanted, and get food as pay.

Temples and religious ceremonies.

The custom of each temple varies: in some a great part of the endowment is held in *barto* assignments by the servants: in another there are no such assignments, and all are paid from the granary. A few of the *pujáris* are Brahmans, or men of a caste like the Bhojkís, who have become of a *pujári* caste, but the great majority are Kanet *zamíndárs*. The office of *pujári* is generally considered hereditary when held by Brahmans or men of *pujári* caste, and the musicians generally hold office from father to son; but the posts of *kárdár* or *chela*, &c., are not usually considered hereditary. The only expenses of the shrines are the cost of feasts, clothes and ornaments for the *raths* and repair of buildings. The greater part of the proceeds of the endowment are expended in feasts consumed by the villagers. At the festivals of some of the more noted shrines, however, there is a general distribution of food to all comers for one day or for several days; and at one or two shrines periodical *brahm-bhog*, or distribution of food to Brahmans, or *sadabart*, *i.e.*, perpetual dole to Sádhs or Hindu *faqírs*, are made.

Endowments of land or land revenue are also enjoyed by the temples, already mentioned, sacred to Shiva and to other orthodox Hindu gods, which are built entirely of dressed stone in the style of the Hindu temples of the plains. These are orthodox Hindu shrines, managed much in the same way as similar temples in other parts of the hills, or in Hindustán. They are in the hands of Brahman priests, and the *zamíndárs*, *i.e.*, the Kanets, agriculturist Brahmans and Dágís, who form the real population of Kulu, have not much to do with them. Some have festivals or fairs at which, by order of former Rájás, the surrounding *deos* and *devís* attend in their *raths* to do homage. Three or four are at hot springs; two near present or former palaces of the Rájás; others like Nirmand and Trilok-náth are at places sanctified by some Hindu tradition.

Deota Jamlu of Malána.

Separate notice must here be made of Deota Jamlu whose principal residence is at Malána in *Waziri* Parol, and who has

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Deota Jamlu of Malána.

temples in Spiti, Kulu Proper, Saráj and Rúpi. His cult is an important feature of the religous life of the sub-division, exclusive of Láhul, and almost everything that is known of him and his worshippers is out of the ordinary. An interesting account of "Malána and the Akbar-Jamlu legend" has been supplied to the Journal of the Punjab Historical Society, Volume IV, No. 2, pages 98-111, by Mr. W. M. Young, I.C.S., who visited Malána in March 1911, and witnessed the principal annual ceremony there.

He writes that the name Jamlu is a corruption of Jamad-Agni, the name of the *rishi* in the Vishnu Purana who sought rest and seclusion in the Himalayas, with his wife Renuka, who is identified at Malána with Naroi, the wife of Jamlu. Jamad-Agni's name is also written as Jamdaggan, and his son Parsu Ráma founded the temple of Devi Ambika at Nirmand, and other temples in Outer Saráj and Bashahr. Parsu Ráma is acknowledged at Malána as a son of Jamlu, who is called Jamdaggan, and the Gyéphang Lha in Láhul, brother of Jamlu, is known as Jagamdamb, apparently a male variant of Jagadamba Devi.

The tradition is that Jamlu came originally from Spiti to Hamta near Jagatsukh and that the Devi Prini on the Spiti route near Hamta is his sister, the Gyéphang Lha who inhabits the high double peak in Láhul which looks down the Beas valley being his brother. Once a year, the Gyéphang Lha comes to Barshaini in the Párbati valley where he meets Jamlu, and the two go to bathe together. Gyéphang is the elder brother. but Jamlu is the wealthier and cleverer. When Jamlu came from Hamta to Malána, with his wife Naroi, they carried a casket containing the other eighteen gods of Kulu (eighteen is merely equivalent to a very large number) and at the top of the Chandra Kanni pass they opened the casket, and a gale of wind blew the gods all over Kulu to their present homes. This story may have originated in some sphere of influence of the Deota Jamlu, the local deities (or headmen subsequently deified as "Thákurs") being appointed by him : there is however no trace now of such a suzerainty, except in the fact that Jamlu still imposes fines on other gods on occasions when the people are in difficulties and come to Jamlu for advice. The opportunity is then taken to rebuke the people for their vices and to confirm the reputation of the *gurs* of Jamlu for truth-telling. Thus quite recently the *gur* of Jamlu at Kulári near Plách confiscated the umbrella of the godling Singa Rikhi of Chaihni and kept it till redeemed by the people. Colonel Bruce in his "Kulu and Láhul" quotes Mr. Howell's account of how the Sarájís in 1882 had to placate Jamlu by sending grass dolls representing their ancestors to be

Deota Jamlu of Malána.

chopped in pieces before him. Mr. Young considers that Jamlu and Parsu Ráma represent in Kulu indigenous deities whose names have been changed by subsequent Hindu immigrants. It is significant that Jamlu pays no dues or obeisance to Thákur Raghúnáthji at Sultánpur and that Malána was at one time a regular asylum for fugitives from justice. There are other Kulu gods who pay no respect to Raghúnáth and the remoteness of Malána would make it suitable for refugees, but there can be little doubt that Mr. Young's theory is correct. Jamlu and Gyéphang are old nature deities of two very high peaks, Deo Tibba (20,417 feet) and Géphan or Gyéphang (19,212 feet) both in very striking situations and neither god has any image. They also have really no temple at their head-quarters. The temple of Gyéphang was erected lower down the mountain merely to suit the convenience of the worshippers, while the temple at Malána is, according to Mr. Young, not Jamlu's, but Naroi's.

It is a curious fact that in Jamlu's temples in the Beas valley (but not at Malána) sacrifice is made by Muhammadan methods to Shah Madár on the date of Jamlu's great festival at Malána. It is not known how the cult of this Musalmán saint came into Kulu, but it may have been introduced in Mughal times.

The connection between Jamlu and the Emperor Akbar is however, very clear, and Akbar is the object of worship and sacrifice on the 12th Phágan every year. The legend is that Akbar was stricken with leprosy because his tax-gatherers at Delhi took 2 pice from a *sádhu* who had been given them at Malána from the treasury of Deota Jamlu. The money was miraculously found in Akbar's treasury, the two pice being stuck together. Akbar was then told to take them to Malána, but was allowed to send them, with a statue of himself in gold and images of his horses and elephants in gold and silver. On their arrival Jamlu was placated, and the king's leprosy ceased. On 12th Phágan every year this incident is re-enacted at Malána. The images are brought out from the treasure-house in which they have lain wrapped for 12 months, and carried with pomp to a little grove above the village, where they are unveiled and set out before a small stone embedded in the ground, the spot to which Jamlu comes to receive the homage of the emperor. But it is Akbar, says Mr. Young, who is worshipped, though he originally appeared (by proxy) as a suppliant before the shrine. For details of the ceremony, which cannot be given here, reference should be made to Mr. Young's description.

There is also a fair held in Sáwan at Malána at which Kulu people attend, and every few years the ceremony of the

Khaika is performed, on the 1st of Bhádon. The intervals are not fixed as they are in the case of the triennial *Khaika* at Shirar, but depend on the will of the god declared by his *gur*. Large gatherings attend this *Khaika* and the Nar is obtained from Maníkaran. A woman of that village is also consecrated to the god and remains unmarried though she is not denied cohabitation with men. As at other *Khaika* ceremonies the Nar is suppposed to die and to be brought to life again : he grants dispensation for the sins of the people and the ceremony perhaps is a survival of human sacrifice, like the Bhunda rite at Nirmand.

The Malána village is divided into two parts about 80 yards distant from each other and the inhabitants of each part take wives from the other. They also occasionally marry into the village of Rashol, no doubt in order to dilute the continual inbreeding which would soon ruin the population. The village stands on the right bank of the Malána glen, some 3,000 feet below the Chandra Kanni pass. The buildings are not very striking, and are constructed almost entirely of fir and stone, with shingle roofs. The sacred edifices consist of Naroi's temples, the god's treasury, a refectory for all the householders who dine together during these festivals, a room for the musicians, and a building within which barley is sown fifteen days before the March festival, so that the blanched shoots may be offered to the god. This offering, called *jari*, is made to other *deotas* as well as Jamlu, and the young shoots are worn by the men in their caps at most fairs in Kulu.

The Kanets of the village (some 300 in number) are collectively known as the *Ra Deo* when assembled together and are believed to be a joint incarnation of the deity The officials are called *lari* : these consist of the *Karmisht* or manager of the god's treasury, two *pujáris* who perform most of the temple ritual, the *gur* or oracle, selected by the spirit of the god which descends upon the chosen one, and eight elders, called *jathere*, drawn from the eight wards of the village. The elders act as a Government and decide all disputes, inflicting fines of moderate amount. and being guided when necessary by the *gur*. The *Ra Deo*, that is, all the Malána people except a few men, old women and children, cross the Chandra Kanni pass in the end of Maghar or beginning of Poh, and spend more than a month in Kulu villages where there are temples of Jamlu, billeting themselves on every house. They also descend upon two villages in Kais and others in Kothi Harkandhi in Rúpi where Jamlu has assignments. The *bari* (office-bearers) pay separate and more frequent visits. During these visits all the Malána men are fed free at the expense of their hosts who fear

Deota Jamlu of Malána.

them as uncanny people, but their food is considered in the accounts of the rents, and all visitors to the fairs at Malána are fed free in their turn; also any *sádhu* or beggar who comes to the village gets food and a blanket if he wants it. The treasury of Jamlu is believed to contain several lakhs of money, the accumulation of centuries. The prescribed form of offering is a small silver model of a horse or elephant. Mr. Young writes that from the tiny shrine near the scene of the March ceremony were produced several large and uncouth silver statuettes of horses, elephants and deer, a large silver umbrella of the kind used by Kulu *deotas*, a smaller one which was afterwards fitted into the back of a very large silver stag, and a bundle of the statuettes presented by Akbar, from which was taken the image of Akbar, of silver or gilt, about four inches high, and twelve more very small images of horses and elephants.

The land revenue of Malána is paid by the *Karmisht* to the Negi of Naggar who seldom visits the glen.

The independent position of the village has continued under every change of government, and as lately as 1883, after a display of more than usual insolence on the part of the Malána people, a mountain battery, route-marching through Kulu, was diverted over the Chandra Kanni pass and spent some days in the village. The Malána people now affect to jeer at the expedition and say that the intruders were punished by the god, in the same way as the Brahman who attempted to bring Jamlu into the pale of Hinduism. But in each case the effect of the visit has been permanent.

CHRISTIAN MISSIONS.

Christian Missions.

There is no ecclesiastical administration in Kulu or Saráj, but missionaries from the Canadian Mission in Kángra occasionally visit Kulu, and there is a Salvation Army Mission and Settlement at Ani near Dalásh in Outer Saráj. The Native Christians there were settled by Dr. Carleton of the American Presbyterian Mission whose property was taken over by the Salvation Army seven years ago. A fruit farm, weaving school, and two educational schools are managed, one school being at Dehuri.

OCCUPATIONS.

Occupations.

The main occupations of agriculture, handicrafts, and trade are treated each in its proper section. The subsidiary occupations of the major part of the population include spinning and weaving of wool, carrying loads, work in forests, *shikar*, *lugri* brewing, bee-keeping, and fibrous manufactures.

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Wool spinning and weaving.

Spinning of wool is done by the men at all odd moments, the washed wool being twisted on a small spindle (*tirna*) which is whirled round between the hands. The men also do all the weaving, which is not confined to any particular caste or village, though tenants very often undertake all the weaving for their landlords in lieu of rent. The loom is a hand-loom of primitive make: the shuttle is pushed through from side to side, and the resulting cloth is narrow, the strips having to be sewn together. But some excellent blankets are turned out, especially in Rúpi (Kothi Bhalán). The patterns are stereotyped, and the colours include cream, white, large and small shepherd's plaid checks, yellow checks on brown, mixed brown and white. The price has risen considerably of late years and ranges from Rs. 6 to Rs. 20. The blankets are exported to distant places down country.

Load carrying.

In the winter large parties of men are met on the roads carrying wool from Akhára for home-weaving, salt from the Drang mine in Mandi, and maize from Kulu to the less favoured *kothis* of Outer Saráj. The carriage of fruit-parcels and mail bags for the post office is a source of considerable profit in the villages near the postal routes, and is undertaken by Kanets and Dágís alike. At the seasons when there is no farm work to do the porterage of travellers' luggage is profitable, but not when field operations have to be interrupted.

Forest work.

Large numbers of men leave Kulu and Saráj annually for *bhuri* or work in forests. This includes carrying of sleepers (*ḍhulái*) and sawing (*chirái*). The sawyers can earn as much as Rs. 15 per month clear profit. The men go to Bashahr, Jammu and Kashmír and work very well there: at places in Kulu they have social and domestic distractions and generally fall out with the sub-contractors, with the result that little money is earned. Absence from home or forest work often extends into a couple of years, and domestic arrangements sometimes break down under the strain. The people of the Sarvari valley go in large numbers to Jammu and Kashmír, and the amount of their earnings may be gauged by the fact that in this tract the compensation payable to an injured husband for carrying off his wife is Rs. 500, whereas it rarely exceeds Rs. 150 elsewhere in Kulu. The runaway couple build them a sylvan bower in the forest and work off the debt in company. The Sarájís go to Bashahr forests and to Simla. The Outer Sarájís hoe potatoes on contract and make charcoal near Simla, while the people of Plách, Srikot, Banogi and other places in Inner Saráj draw rickshaws.

Shikár.

The people of Kulu and Saráj are born poachers and are believed to keep a good many unlicensed weapons. They will

Shikár.

not shoot monkeys, which do as much damage as any other class of animal, but they regard sitting pheasants as fair game, and no doubt these birds do considerable harm to their crops. They also kill many birds of prey and weasels, stoats, etc., which would if left alone be of great use against the enemies of the crops. The snaring of muskdeer and hawks is licensed in certain places.

Trade in hawks.

Hindu traders, called *paprálas*, come from Ambála and Patiála to purchase hawks which they train and then sell at a profit in the plains. They pay the hawk-catchers as much as Rs. 150 for a young bird; the older ones are, of course, less valuable. The best way of catching hawks is in the *tháti*, which is a sort of triangular enclosure erected at a prominent place on a ridge or spur, so as to draw the attention of the birds. Poles are set up at the three angles, and two of the sides are enclosed with nets but the base of the triangle which is towards the hill top is clear, the apex is on the down hillside. A *chikor* is tied close to the ground inside the enclosure to attract the hawks by its call and when one swoops down upon it a man who is concealed in a thicket close by rushes forward, and drives the hawk into the net where he secures it. Another method of catching the birds is by the *lárki* which is a succession of nets set along a ridge or spur. Though the snarer gets a good windfall if he catches a young hawk, he is not usually successful in getting one more than once every few years.

Lugri brewing.

The brewing of *lugri* for sale was formerly a large and prosperous business for many Láhulas and Ladákis. The shops have now been much reduced. But home-brewing is still allowed and goes on in most houses of the main Beas Valley. There are two kinds of *lugri*, called *chákti* and *sur*. *Chákti* is made from rice and *sur* from inferior grains such as *mandal*, *kodra*, etc. The consumption of *lugri* in the Upper Beas valley leads to much drunkenness and is a great curse.

Bee-keeping.

Nearly every house has its beehives in the wall. The honey is often fouled with larvæ, etc., and modern methods would increase the profits immensely. The honey is bought by merchants in the villages, or consumed at home. One hive will yield four seers *pakka* in the autumn; the June takings are not so good. The practice of beating pots and pans to induce the swarm to settle down prevails. The owner and his friends call out at the same time :—

Besh, manhun, besh, age jasi, ta manhun ranešri drohi hosi :

"Settle, my bees, settle down : we have taken the oath of your king, so go no further."

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Section C.

Fibrous manufactures.

Fibrous manufactures are nowhere in the sub-division a regular source of profit. From the fibre of the wild nettle and of cultivated hemp are made ropes, shoes and bags, and nets for catching fish or snaring hawks; the manufacture of these is not restricted to any caste, but each household, as a rule, makes its own, and only sells if there is a surplus stock and money is required. The price realized for these articles has been discussed in connection with the description of hemp cultivation in Chapter II. The wild nettle from which also fibre is obtained has to be more carefully handled than hemp, when it is cut in September or October, the reapers protect their hands from the sting with sheep-skin gauntlets. When the stalks are quite dry they are steeped in water for three or four days, after which the fibre is stripped off and worked by hand into strings.

Birch bark serves a variety of purposes in a cultivator's household, being used for wrapping up honey, *ghi*, and the like, and as a support and covering for rice seed when it is being steeped preparatory to sowing It is also utilized to form the covering of a large rough umbrella used by the hillmen. Mats (*mandri*) are made from rice-straw, and also from certain kinds of grasses.

FOOD.

Food.

The daily meals of the Kulu people are during the greater part of the year two in number only, breakfast (*kalár*, *kulári*) at 8 or 9 A. M. and supper (*biáli*) at sunset. In the summer when the days are long a light mid-day meal of wheat or barley bread (*dupahri* or *dupauhru*) is eaten in addition. The staple food of the people consists of cakes or *siddu* made of barley flour in the summer and of maize or *kodra* or buck-wheat flour in the winter, according as the elevation permits the cultivation of the better kinds of grain or not. Wheat flour is also eaten, but is considered as rather a luxury, and most of the wheat is sold to pay the revenue; another dish is *phimbra*, consisting of amaranth or wheat flour with rice and vegetables, and the favourite stew of rice and vegetables is called *kaupi*. Poppy seed is sometimes added to the cakes to flavour them. They are eaten with curds (*chhas*) both at the morning and at the evening meal. Curds almost entirely take the place of *ghi*, which is manufactured only for sale. The curds are churned in an earthern vessel and once made are kept going without the vessel being ever cleaned out; the new milk morning and evening is poured into it and churned up along with the old curds. *Sariára* is made into a thin sort of porridge. Rice is a common article of food in the *kothis* in which there is much irrigated land; elsewhere its place is taken as *bhat* by *china* and *kangni*, the former of which is nearly equal

to it in quality; the *bhat* boiled with water and curds is called *sídhu*. Peasemeal made from *másh* or *kulth* is kneaded into balls, which are cooked by being steamed over a vessel of boiling water. A favourite dish at harvest time is parched Indian corn or wheat, sometimes mixed with hemp-seed. Meat is seldom eaten except at great festivals and once a month or so in a well-to-do family. In places where much hemp is grown for fibre the seed is eaten.

The density of population in Saráj has already been noticed, and there the grain produced is scarcely sufficient to supply food for the people. None is sold, and a considerable quantity is annually imported from Kulu. Money to procure it is obtained by the sale of opium and in other ways which will be noted hereafter. At the beginning and again at the end of the winter numbers of Sarájís may be met on their way home with loads of grain bought in Kulu on their backs. They come from Outer as well as from Inner Saráj for this purpose, but those from the former *wazíri* are generally in quest of Indian-corn only, which is, for reasons difficult to understand, scarce in their part of the country. Of such old standing is this annual movement of grain importers that they have a special designation--*basáju*—in the local dialect: the *basáju* besides bringing home sufficient grain for his own wants is generally able to compensate himself for the trouble of his journey by disposing of a portion of his load at a profit to some of his neighbours.

Horse-chestnut flour is consumed in every village where the nuts can be obtained, and great care is bestowed by the women on its preparation. Each nut is crushed flat separately on the stone threshing floor by a blow from a wooden mallet. The crushed kernels are separated roughly by hand from the shells and thrown into a sieve. The finer flour which passes through the sieve is first dried in the sun on the house top, then washed carefully in a wooden trough to remove grit, and then finally dried again, and is fit for use. This product is called *sík*: it is a fine, snowy white, flakey flour, and by no means unpalatable. The remains of the kernels which fail to pass through the sieve are soaked in a *kilta* beneath a spout of water and then dried; this coarser flour is called *jím*. It is more gritty than *sík*, but not inferior in taste to buck-wheat. In some of the poorer villages, in *Kothi* Sehnsar, the hard wild medlar (*shegal*) is used for food. The fruit is forced into a state of rotten ripeness by being kept some time under hay or straw on the threshing floor, is then dried on the house top, and afterwards pounded, to be eaten in porridge along with *sariára* or mixed with barley flour in cakes. The acorns of the *kharshu* or brown oak are in seasons of scarcity prepared for food

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Food.

in the same manner as horse-chestnuts. Other products of the forest which lend variety to the daily fare are mushrooms, several kinds of roots and herbs, the edible fern, and the fruits and berries which will be noticed in Chapter II-C. One kind of mushroom (*sunehru*), found in the spring, can be dried and kept for use for a year. During the rainy season there is an immense variety of mushrooms, and even such as grow on tree trunks are eaten, though those found on certain trees are said to be poisonous; the poorer people living in the neighbourhood of Sultánpur make a little money by gathering and selling the edible ones. A root or fungus, called *kaniphra*, is gathered in considerable quantities in deodar forests at mid-winter. A favourite wild herb is *phaphru*, the leaves of which are eaten as a vegetable. The edible fern (*lingri*, young bracken) is also eaten as a vegetable, and is pleasant even to European plate in a curry.

For food on a journey there is nothing in the opinion of a Kulu man to compare with *satu*, which is flour made from barley-grain cut before it is quite ripe, and parched upon a flat stone laid over a fire-place. A handful of *satu* kneaded with cold water into a ball makes a tasty enough meal for a hungry man, and contains sufficient food power to keep him going for a long day in the fields or on the road. These balls (called *pindal*) form the mid-day meal when *dupuru* (baked bread) is not procurable.

Other articles of food are potatoes, which are boiled and then swum in *ghi* or oil stirred with a spring of *pharu* (a wild herb like assafœtida), yams (*kachálu*) which are browned over the fire; and the dried leaves of buckwheat and of mustard plants (called *shakeo* and *khapi*, respectively) which keep for a long time and supply vegetable food even in the depths of winter. A special garden crop of mustard is grown in the autumn to provide *khapi* in addition to the spring crop sown to produce seed and oil. *Chiltás* are flat cakes of flour kneaded with water, baked brown on a flat iron pan or "girdle."

The inhabitants of the Saráj tahsil, with the exception of a few who have acquired a taste for country spirit during visits to Simla or to the plains, drink no kind of intoxicating liquor. The people of *Wazíri* Rúpi are equally temperate, though in that part of the sub-division a mildly intoxicating, but very refreshing, infusion of hemp-leaves (*bhang*), violets and sugar is occasionally indulged in at fairs. In the three remaining *wazíris* of Kulu Proper, towards the source of the Beas, there is much drunkenness, and the favourite drink is a hill-beer of which there are two kinds, *lugri* or *chákti*, and *sur*. The former is made from rice, fermented with *pháp*, a kind of yeast which is imported

Food.

from Ladák or Baltistán, and the composition of which is a trade secret of the brewers, who nearly all of them Ladákís, or Láhúlas, are thus able to keep the roadside public houses and the drinking tents at fairs in their own hands. Four measures of rice are mixed with four equal measures of *pháp*, and to the mixture is added the same bulk of water; the whole is sufficient to fill a large earthenware vessel in which it is allowed to remain for 4 days; the liquor is then strained off, and will keep good for eight days; it is acid and sickening, and an acquired taste is necessary for its appreciation. *Sur* is the "table beer" of the country, brewed by the people in their own homes, and is made in the same way as *chákti* but with *kodra* millet instead of rice, and a ferment called *dhili*, instead of *pháp*. *Dhili* is a mixture of *satu* and various herbs kneaded into a cake without water, and kept warm below a layer of barley straw for twenty days or so, when it begins to smell; it is then dried and is ready for use.

The habits of the people in regard to food are largely affected by local influences. The flesh of the pig is eaten only by low-caste families, and only by them to any great extent along the Sutlej: in Upper Kulu pigs are kept only in a few places. Though pheasants and game are lawful food, fowls are eschewed everywhere except in the valley of the Sarvari, where they are kept in large numbers and freely eaten by all classes except perhaps Brahmans. In the same valley the use of tobacco is forbidden, but by way of counterpoise *chákti* and *sur* are drunk to excess. Metal vessels and dishes are now generally made use of: platters of rhododendron wood were formerly used by all classes, but are now to be found only among the low caste people of Outer Saráj.

The peasants are not very hospitable to one another, and when any one has to pass the night away from his home he takes care to have a provision of *satu* along with him. But on a great occasion the family stores are freely indented on, and at a wedding in 1889, in a well-to-do family, the feast consisted of eight sheep, four goats, twenty maunds of rice, thirty-two maunds of wheat, and 100 seers of *ghi*.

DRESS.

Dress.

The people are usually well and comfortably clad in homespun cloth made from the wool of the flocks that abound in their hills, but will often wear very ragged garments for every day work. A single blanket, white, or white checked with red, or black and white chess-board pattern, is the only garment worn by a woman, but it is so carefully and neatly adjusted, pinned at the bosom with a solitary pin and gathered in by a sash at the waist, that while showing gracefully the lines of the figure it forms a complete and modest robe covering the arms, the body, and

the legs to below the knees. Socks or stockings are luxuries, but woollen gaiters are occasionally worn. It is to her head-dress that the Kulu woman devotes all her arts of coquetry. The young girls go about bare-headed with their hair plaited into long pig-tails hanging down their backs, and sometimes lengthened by the addition of cotton thread for ornament only, be it said, for the contrast between hair and thread is too apparent to deceive. Older girls twist the pig-tail into coils arranged on the top of the head, with a coquettish little cap perched just above the temples or sometimes a larger cap crowning the chignon; but the favourite head-gear is a kerchief, black or scarlet, confining the whole of the hair, bound tightly above the temples and over the head so as to show the whole of the brow. and tied in a knot at the back of the neck. The whole is prettily set off by a silver ornament which secured to the centre of the kerchief on the top of the head supports a pendant hanging over the forehead, and two strips of dainty filigree work, which, drooping over either temple, are attached to rings in the ears. Great bunches of silver ear-rings are worn, and two nose-ornaments of gold, one a leaf-shaped pendant (*bulák*) carried by both maids and wives, but never by widows, and the other a plain large ring, the distinguishing mark of a married woman. The throat is often loaded with necklaces: one or two bracelets adorn each wrist; and silver anklets, sometimes plain and sometimes curb-chain pattern, are peculiar to certain localities. The full show of ornaments is only exhibited at fairs and feasts, and women who on account of being in mourning are unable to wear their jewellery sometimes hire it out for small sums to others to wear upon such occasions.

A man's dress consists of a loose woollen tunic, white, grey, or brown, girt in at the waist with a sash. Loose woollen trousers, gathered in tight at the ankles, are added in cold weather or on gala occasions, but are often dispensed with on hot days or when hard work is required. A white or checked blanket like a plaid lends something of the picturesque to this loose fitting costume: it is worn round the chest, the ends crossing at the back and then brought forward over the shoulders from which they would hang down to the thighs were they not secured each by a large pin to the portion of the plaid crossing the chest and then flung back again over the shoulders. Between the two pins hangs a neat steel or brass chain supporting a bunch of small surgical instruments, a probe, a lancet, a pair of pincers and similar contrivances for operating on sheep and cattle. Otherwise no ornaments are ordinarily worn except occasionally a necklace or an amulet, or a charm in memory of a deceased relative. The head-dress is a round black cap, with a stiff edging, sometimes

Dress.

ornamented by means of silver pins with broad carved beads stuck in it; on festival days too plumes of *monál* crest are worn by such as are the fortunate possessors of them. In Outer Saráj *pagris* are very generally worn, and also white cotton caps. Shepherds tending their flocks prefer a large conical woollen cap with flaps like a night-cap. Nearly every man carries a long cylindrical basket on his back to hold the wooden spindle and the wool with which he spins worsted as he walks long; and a flint and steel, with a small spindle-shaped wooden box for holding tinder, hang from his sash, for though matches are sold in Kulu the older contrivance is more trustworthy in wet weather.

Both sexes generally go shod, some with leather shoes, but most with grass shoes plaited in their homes. A superior kind is made in Outer Saraj, the uppers of which are made of hemp, and the soles of nettle fibre.

All are fond of flowers, and on festival days wear garlands round their necks and put bunches in their caps or in their hair.

Dwellings.

The dwellings of the people have been described above under the heading of "village sites and houses."

BIRTH AND DEATH CEREMONIES.

Birth and death ceremonies.

On the birth of a male child there is a feast, and a present is made to the headman (the Negi) of the *kothi* The child is named some time within the year following, and is then produced in public, and there is another feast. It is a common custom in Outer Saráj to give two brothers names which rhyme.

A corpse is burnt ordinarily on the day following the death; before the cremation it is covered with a cloth, and the musicians play. If the deceased is of good family his ashes are taken at once to Hardwár, whatever the season of the year: otherwise they are kept till the winter, when a party is made up to convey to the Ganges the ashes of all who have died in the neighbourhood during the summer. The formal funeral ceremonies (*gat sat*) are performed on the tenth day after death when the deceased's clothes are divided among the officiating Brahmans and the *kumhárs* who provide the earthen pots for the funeral. On the thirteenth day (*páchi*) a goat is sacrificed and is eaten at a feast by the relatives of the family. The Kanets of the lower class (the Ráos) perform all these ceremonies on one day, the third after the death. In some places it is usual after a cremation to make a small foot-bridge over running water somewhere in the neighbourhood to help the passing of the soul of the deceased. On the fourth anniversary of the death the *chaubarkha* feast is celebrated, and until then the widow, if faithful to the memory of the dead, should remain in mourning and refrain from wearing her ornaments; she is forbidden for ever to wear again her gold nose-ring and *bulák*.

CHAPTER II.—Economic.

SECTION A.

AGRICULTURE.

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General conditions.

The cultivated area of Kulu and Saráj amounts to only 7 per cent. of the total area of the tract. The remainder consists of some privately-owned culturable land (about 10,000 acres) and unculturable waste such as roads, river beds and sites of houses, and of forest, including demarcated and undemarcated forest, the latter only being open to cultivation. The extent of the undemarcated forest has never been ascertained with any degree of accuracy and the amount of Government-owned culturable waste cannot be put into figures : it is steadily diminishing owing to the grants of waste made from time to time to right-holders who wish to break it up.

Soils.

The geological features of the tract are fairly constant throughout, and the only exception to the general prevalence of metamorphic crystalline rocks is the small belt of sedimentary limestones and quartzites found between Bajaura and Plách. The soil of the hillsides is usually glistening with particles of micaceous rock, and in the proximity of forests - more usually in the higher elevations—contains much vegetable mould. The soil does not lie deep anywhere except on the alluvial slopes which border the river beds. These are extensive in the Beas valley, and are full of granite boulders washed down from the high peaks, except in the lower reaches below Sultánpur where the lower fields tend to become broader and are composed in places of a reddish and rather stiff loam.

Classification of fields.

There being no wide areas marked by differences of soil, as in Kángra, the classification of fields adopted at the various Settlements of the Land Revenue has followed the variations of fertility due to the position of the fields rather than to the ingredients of the soil. In almost every valley all the different classes of field are found and the assessment circles are arranged according to the old geographical divisions into *wazíris* and not by stretches of distinct soils. The fields do as a matter of fact lie in belts, which have their local names, as described below, but these belts are so intermingled owing to variation of aspect, and are so indefinite that they cannot be taken as guides for classification. In the upper part of the Beas valley the alluvial slopes near the river and its tributaries are very much valued as rice-growing lands : lower down, below Kais village, this part of the cultivated area is called *balh* and the water-supply is much less secure than in the upper valley, considerable stretches of it remaining unirrigated. In Saráj the alluvial belt is called *niul*

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Classification of fields.

Above it lies the *manjhát* or mid-zone, up to about 7,000 feet, more or less, according to aspect. Above the middle zone is the upland or *gáhar* (*saraj* in Saráj), for another thousand feet of elevation. This is in places overlain by the *kutal*, which consists of steep unterraced hillsides, where the snow lies late. In Saráj there is another class of land called *kater*, which is cleared of undergrowth every few years. These distinctions have not been disregarded in assessment, but for purpose of field classification the following grades have been adopted. The irrigated land is called *ropa*, and falls into three classes: the best is that which lies in the centre of the irrigated block of land, receiving plenty of water, warmed and enriched by its passage through higher terraces: this is classed as *ropa* I. The second class is at the head of the block, where it is copiously watered, but the water is cold: the third class of *ropa* is at the tail of the supply. The unirrigated land (*báthil*) is of four classes: the first is double cropped land (*ghar ser*) near a hamlet and heavily manured: the second also frequently yields two crops, but is manured less easily being further away: the third class bears only one crop in the year owing to its distance from the homestead: the fourth is the poorest class of land and much of it is *kutal*. The fields are thus classified, firstly, according as they are irrigated or not, and secondly, if irrigated, according to the quality as well as the quantity of the water: if unirrigated, the main question is whether they are near to or far from the hamlet so as to receive proper attention from the farmer or not. Aspect is also an important condition of fertility, but it operates differently according to the season: in a wet year the sunny slopes fare best, and in a dry year those which lie in the shady (*shilli*) side of the valley. Proximity to a forest is usually disadvantageous, owing to the shade of the trees, and exposure to the ravages of monkeys and other destructive animals. All these points are taken into consideration in distributing the land revenue assessed on a collection of hamlets (*pháti*).

Systems of agriculture.

In order to reap every advantage of variations in the weather, and to make the most of the short ripening seasons as they pass from the lower to the higher levels, the successful farmer should have his land well distributed and should employ as many kinds of crop as possible. It is not always possible to own land at different levels, and in different aspects, but villages which contain no *ropa* (irrigated land) frequently own blocks of it in another *pháti*, or collection of hamlets. Considerable skill is also displayed in putting in the right kind of seed at the right time in the field where it will produce the best crop. If the rain comes early, the early varieties will be at once sown, and frequently fields must lie unsown for many

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days before the season is favourable. Insurance against bad or uncertain seasons is obtained by a judicious selection of crop.

Systems of agriculture.

The Kulu peasant admittedly succeeds on the whole in getting a fair return from the steep hillsides. The men do the ploughing and repairs of the retaining walls of the terraces, and fencing: the women do the manuring and weeding and most of the reaping. Frequently in the monsoon season, the men have to help to keep down the weeds. The men look after the flocks and do the heavier work on roads or in forests, but the hay-making is generally done by the women On the whole the more prosperous Kulu farmer leads a life of comparative ease. For two months in the spring there is little farming work to do. At other times the women folk bear the heavier share of the work, and the ploughing which is done by the men is a much less frequent operation than it is in the plains. In the *balh*, where manure of all kinds is comparatively scarce, the soil has to be turned more thoroughly, but even there it is only the Aráín tenants who appreciate fully the advantage of numerous ploughings.

Sowing.

Sowing is done broadcast, as a rule, and the seed-drill is hardly seen except in the hands of the Aráíns of the *balh*. Times for sowing and harvesting vary with the seasons and the kind of crop.

Ploughing.

The plough (*hal*) is a wooden one, with a long iron point. It is light and adapted to porterage on the hillsides, and though it does not cast the earth aside or disturb the subsoil, it will only be superseded by a plough which can do that work as well as be light enough to be carried about in a mountainous tract. The labour of ploughing is very much more arduous than in the plains owing to the severe slopes of the hills and the small size of the fields: constant turning and climbing is involved, whereas in the plains the ploughman can spend all his time on the furrow.

Harrowing and levelling.

Harrowing is only done for rice, and by Aráíns in the *balh* for maize. The instrument used is a thick plank furnished with wooden teeth (*jandiál*), on which is fixed a handle, as on a plough. The operator sometimes stands on the harrow. Clods are ordinarily broken up by the *jol* or leveller, which resembles the harrow, but has no teeth. Both these instruments have a pole of about 6 feet in length which fastens on the yoke of the oxen. The bank (*dhek*) of a field is dressed with a broad hoe, the *kahi* or the *kudál*, which are also used for cleaning watercourses, etc. The spade proper and fork are not used.

Weeding.

Weeding (*nindhái*) is done by picking the ground over with a light iron pick (*kilni*) or a flat trowel (*khurpa*). It is nearly all done by the women.

Manuring.

Women carry the manure and spread it on the fields using the *kilta*, a long funnel-shaped basket of bamboo resembling the wicker basket used in the Alps. Farmyard litter is generally mixed with *suhr* (pine or deodar needles) collected from the forest. The needles are raked together with an iron-toothed instrument which frequently uproots young forest seedlings. The women however do not go far from home for this purpose: so the damage is confined to a small area. The loppings of pine or fir are also taken and this practice has devastated large areas of forest : it has now been confined by order to undemarcated forests. The cattle houses are swept clean after the winter and the manure collected in heaps near the houses, mixed with the *suhr*, and left to mature. A large proportion of the cattle are kept merely for their manure without which there would on many fields be little or no crop. Sheep, goats, and other stock are penned in fields for the sake of their droppings, and a long stubble of wheat, barley, maize and amaranth is left on the fields to be burnt or ploughed in : similarly weeds are cut in the crop and left to rot and be ploughed in. The manuring of rice lands at a distance from the village site often a thousand feet or more above the *ropa* entails considerable exertion.

Fencing.

Certain paths are kept open for cattle and these are usually carefully fenced with dry thorns set in a loose stone wall. The remaining paths are not used by cattle, except when actually engaged in field operations, and are not fenced. There are few quickset hedges. In some fields near the main roads substantial stone dykes are built to protect the crops.

Crop watching.

The maize crop always needs careful watching (*paira*) to keep off black bears. These intruders do much damage and come regularly into the maize fields throughout the tract. Some are killed by the villagers and others scared from field to field, but it is extremely hard to see them in the night time and they are often very ferocious when attacked. Monkeys could be kept off by dogs, but dogs are not trained for this purpose owing to the risk they would run from panthers. Guns are given out on a seasonal license, which remains in force during the monsoon and early autumn, and are returned at the end of the fixed period. They are eagerly sought after, except in Outer Saráj where the distance from the tahsil is often prohibitive, and much damage is done by wild animals to the various crops, more particularly those of the *kharif*. The people will not shoot monkeys (*hanumánu*), but are quite pleased if any one does the work for them. The maize is generally watched from a shelter (*tápri*) erected on poles in the field.

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Reaping.

Reaping (*lánni*) is done by the toothed sickle (*dáchi* or *sastar*) made of iron, with a blade about a foot long The crop is cut by the cultivators with the assistance of neighbours and there are few paid labourers. The sickle is sometimes thrown down in the path of a passer-by, who is expected to step over it and pay a fine according to his means. This is apparently for luck, and much disappointment ensues if the sickle is avoided.

Threshing and winnowing.

The grain is carried home in the sheaf and spread out to dry in the paved courtyard (*khal*) which is attached to every house: the floors are not made in the fields. The cattle tread out the corn (*khol phi na*), and usually wear a muzzle (*chikra*) during the operation. The corn is separated from the straw by the fork (*siul*), and is winnowed by throwing it against the breeze from a basket (*tokru*): it is then gathered and sifted in a flat tray (*sup*) of reed. Afterwards the corn is stored in wooden boxes (*kothi*) kept in a separate room of the house.

Stacking.

The straw is stacked in small round stacks which are thatched and grouped near the homestead: the stacks are called by various names according to the kind of crop: *bhujnu*=wheat stack, *kulráta*=*kodra* stack *chaliáta*=maize stack, *ángi*=barley stack. The straw is usually fed whole to cattle. Sometimes a stack is constructed in a long line down the hillside, where it is steep enough to ensure that all rain-water drains off. Hay is generally twisted into loose ropes (*láhul*) and hung up over the boughs of trees, in which other fodder is also very often kept.

Rotation.

The large variety of crops grown allows scope for varied systems of rotation. In the best manured lands in the *bath* barley follows maize, and maize follows barley in unfailing succession, or wheat may be the *rabi* crop regularly grown in the rotation. In less highly manured lands *sariára* or *kodra* or *china* mixed with *kangni* is grown as the *kharif* crop in alternate years with maize. In the *manjhát* wheat follows *kodra*, and is followed by a fallow, after which a barley crop is raised, and then the rotation recommenced with *kodra*. Another rotation at a slightly higher elevation is wheat, then fallow, followed by barley, then buckwheat, then a fallow. In the *gáhar* barley follows *sariára* regularly in the best fields; and in the next best the rotation is varied by wheat followed by a fallow being taken in alternate years. In the inferior fields wheat and buckwheat succeed one another, or only one crop is raised in the year.

Principal crops.

The percentage of the cultivated area occupied by the principal crops according to the results of the cropping returns

from 1891 to 1910 is as follows :—

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Section A.

Principal crops.

Crop.	Wazírís Parol, Lag Sari, Lag Mahárájah.	Inner Saráj.	Outer Saráj.	Rúpi.
		Kharif.		
Rice	15·25	8·16	6·61	5·84
Maize	16·05	19·46	3·52	28·03
Sugarcane	·36	...	...	·09
Kangni	·75	8·32	6·28	2·02
Kodra	10·95	3·26	9·70	7·35
Sariára (amaranth) ..	6·65	9·06	8·97	5·47
Bhresa	1·07	·21	·50	·44
Kathu (buckwheat) ...	3·47	3·59	1·65	2·89
China	5·70	2·29	2·45	3·79
Mung, mash ...	7·26	4·62	3·53	6·83
Til	·01	...	·02	·01
Red pepper	·15	...	·01	·07
Hemp	·14	·59	·43	·28
Tobacco ...	·77	·68	·36	·45
Tea	·13	...	...	·01
Fruit	·15	·01	·02	·02
Potatoes	·19	·03	·02	·18
Vegetables	·49	·36	·48	·39
Turmeric	...	·09	·01	·02
Other *kharif* crops ...	5·78	3·40	6·15	3·95
Total *Kharif* .	75·19	54·13	56·66	66·68
		Rabi.		
Wheat	35·83	34·05	40·35	33·28
Barley	11·15	26·59	20·93	16·84
Gram	·03	...	·17	·02
Masar	·41	·61	·27	·34
Peas	.	·01	...	...
Sarson (mustard) ...	2·99	·18	·01	2·67
Vegetables	·11	·01	·01	·02
Poppy	1·48	2·25	2·50	4·97
Other *rabi* crops ...	·64	·04	·19	·63
Total *Rabi* ...	52·59	63·74	64·43	58·77
Total *Rabi* and *Kharif* ..	127·78	117·87	115·09	127·45

The figures show considerable variation from those of the settlement of 1891 and it seems clear that the year then taken was an exceptional one, allowing of much more double-cropping than was subsequently found possible. The general tendency is to put foremost the planting of food-grains, as is natural in a poorly fed tract. In the case of the *Wazíris* Parol, Lag Sari and Lag Mahárájah there has been a reduction in the areas under barley and wheat, and a consequently smaller proportion of the *rabi* as compared with the *kharif* harvest. The cultivation of maize is expanding in Kulu Proper, and the American variety is becoming much more popular in spite of the much longer time it takes to ripen. In Saráj only about one-seventh of

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Principal crops.

the cultivated area is cropped twice in the year, and the proportion is smaller in Outer than in Inner Saráj. In both *wazírís* the *rabi* is the more extensive harvest. This is because the excessive rainfall on the higher hills delays the ripening of the crops and produces more straw than grain. The *kharíf* harvest in the lower villages of Outer Saráj is, however, as extensive as the *rabi*. The *rabi* area has decreased throughout the tahsíl, and the double-cropped area is hardly more than one quarter of the total cultivation in any part of the tract.

The following is a description of the main crops :—

Rice.

The climate is unfavourable to the production of the finer kinds of rice—*begam* and *básmati* – which are grown only in one or two places in the lower parts of the Beás and Sutlej valleys. In the Kulu tahsíl the most common varieties are *matáli, játu* and *máhuri*. The two latter are alike, and are often sown mixed, the mixture being called *gargal* : the ears are drooping, and the beards white and silky. These are sown throughout the valley up to an elevation of a little under 6,000 feet ; above that elevation they are replaced by *matáli*, the ears and barbs of which are brown and upright. In the lower part of *Wazíri* Lag Mahárájah unbearded varieties, called *jaluhara*, and *mogai* are grown These fetch a better price than *játu* while *játu* sell for more than *matáli*. In Saráj *raili*, an unbearded variety with a reddish grain, is the most common in the lower rice lands, and *chhuwáru*, which has a white grain and short upright red barbs, is generally sown in the higher ; and here and there *játu* has been introduced from Kulu. The rainfall is so great that rice is produced extensively in unirrigated as well as in irrigated land, especially in Saráj, but the varieties grown without irrigation are different from the above : the chief are *rachhera*, the husk of which is dark coloured ; *lal máhuri* distinguished by a red husk ; *dhán basáhru* with a yellow husk ; *rundlu*, black-eared ; and *báeru*, an unbearded variety.

Rice is sown broadcast only in Khokhan and Bajaura *kothís* where the cultivators are settlers from Mandi State, chiefly Aráíns. Elsewhere the rice is sown in nurseries early in May, and planted out in the fields between the latter half of June and the end of July, according to elevation. *Matáli*, *básmati* and *chhuwáru* rice is forced artificially by being kept moist between layers of birch bark, and is not sown in the nursery till it has germinated. A better yield is obtained by the planting than by the broadcast system, but it requires very much more work. If the fields have lain fallow in the *kharíf* they have to be first hoed before they are ploughed up. The land is manured either with a coating of farmyard manure, or by sheep being penned on it,

Rice.

or by both methods: the nursery is very heavily manured, and the same plot is always reserved for this purpose, so that the soil may be as rich as possible. Each proprietor has his appointed day or days for receiving water for his rice-planting, and when his turn comes all the people of the village or *pháti*, men, women and children, turn out to help him, and are fed at his expense. While the men plough the fields, repair the ridges made at the foot of the field terraces for retaining the water, turn on the irrigation channels, and drive the bullocks which drag the huge rakes to churn up the mud, the women pull up the plants from the nursery and plant them in the fields, working in rows and singing merrily all the while. The field is watered for a month after planting, and is then weeded and watered again; another watering is necessary when the ears form, and another when the grain sets. Harvest time is in October when the grain is cut and allowed to lie on the field to dry for a few days; it is then stacked at the threshing floor until the *rabi* ploughings and sowings are over, when it is threshed in November or December. In Saráj the blocks of rice-land are not so large as in the Kulu tahsíl, and the people do not turn out to help each other with their rice-planting; each family prepares and plants out its own bit of land. It is a common practice in Outer Saráj to sow *másh* on the small ridge made at the foot of the field terrace for retaining the water, both to give it solidity and also to utilize all the culturable area possible. The wild *shwánkh* grass grows thickly in rice-fields, and is allowed to grow up along with the blades of rice from which it can hardly be distinguished; when it flowers it is cut to be fed off green to the cattle, or to be made into hay. The fertility of rice and of maize fields has been much reduced by the operation of the forest rules (1891) which forbade Gaddís to stop in the valley: formerly their flocks provided abundant manure.

Maize.

Maize is sown at the end of May or in June, in fallow land or in succession to barley: it is never irrigated in Kulu. Even in the best land it is usual to give a fallow for one harvest every second or third year. The produce is generally excellent, but it is much sought after by bears, monkeys and birds, and consequently the heads are generally collected about the end of September or beginning of October before they are quite ripe, and are laid on the house roofs to ripen, as they can there be guarded more effectually. The bright orange hue thus lent to the housetops is a striking feature of the Kulu autumn landscape. The percentage of cultivated area under this crop varies greatly in the different parts of the sub-division: in Upper Kulu where rice is the most important produce, it is 16, in Rúpi and Inner Saráj, where it is the most paying *kharíf* crop, 28½ and 19½ respectively;

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Maize.

and in Outer Saráj only 3½. There is much land in the latter *wazíri* which seems eminently suited for the production of maize, and it is difficult to understand why the grain is comparatively so little sown. The fact that the mission at Ani can grow American maize successfully has not made much impression on the country-side.

Other *kharíf* crops.

Kodra (*Eleusine coracana*), *ogal* or *bhresa* (*Fagopyrum emarginatum*), *kangni* (*Pennisetum italicum*), *chína* (*Panicum miliaceum*), *sariára* (*Amaranthus anardana*) are also sown towards the end of May in the fallows in the higher lands, and in June in succession to barley in the lower lands. All require careful weeding and thinning to remove the redundant growth due to the rains. In Outer Saráj this is done by harnessing a pair of bullocks to a large rake and making them drag it through the field. In that *wazíri chína* and *kangni* are highly valued, and are grown as separate crops without intermixture, though the latter is frequently sown mixed with *kodra* or with the unirrigated varieties of rice. But in Kulu *chína* and *kangni* are always sown mixed, and often *kodra*, with sometimes *sariára* as well, is added to the mixture. *Sariára* may be sown rather later than the other crops and *másh* and *kulth* pulses may be sown later still; these grains are therefore preferred for *dotasli* land. There are three varieties of *sariára*, one *ták* or *dhángar*, with very large crimson combs or heads, the other two with smaller heads, crimson and golden in colour, respectively. Buckwheat *Fagopyrum esculentum*) is grown in the *kutal* in the manner described above, and in the *gáhar* in succession to wheat, year by year, or with occasional fallows. It is locally called *káthu* and is an inferior grain in comparison with *bhresa*. *Másh* pulse is often sown in Indian corn, *chína* or *kangni* fields so as to utilize all the crop-bearing area possible. On the steep and hot hillsides along the bank of the Sutlej the pulse called *kulth* is much grown in the *kharíf* harvest. *Til* and cotton were introduced before 1891 in the very low-lying land on the Sutlej bank. Turmeric (*haldi*) is here and there produced in the lower villages.

Tobacco.

Tobacco is grown as a *kharíf* crop in Kulu, generally in richly manured plots close to houses. It is sown in small nurseries, and afterwards planted out; the leaves are dried and rolled up into thin tubes, in which form the tobacco is sold. It is grown mainly for home consumption, but in some places for the market as well, and is a lucrative crop; the Sarájís are not able to grow enough for themselves, and have to import from Upper Kulu. It has a pleasant flavour, and is distinct from the "*gobi*" variety grown in the plains, which has been introduced to a small extent by the Aráín settlers in Wazíri Lag Mahárája. American and

Tobacco.

Havannah leaf has been raised with success at Raisan by Mr. Minnikon, but its manufacture has not been attempted on a large scale.

Hemp.

Hemp is grown extensively in the high-lying villages on the slopes on both sides of the Jalori ridge where the excessive rainfall which is fatal to the *charas* excretion of the plant, is favourable to the development of the excellent fibre. It is sown in the richly manured plots within, or close to, the hamlets, and also in the glades or *tháches* in the forest where sheep are regularly penned. The produce is estimated as high as five or even ten maunds of fibre an acre, and sells at 8 to 16 *pakka sérs* per rupee to the inhabitants of villages where hemp is not grown. Most of the fibre, however, is manufactured where it is grown into ropes and grass-shoes (*púla*), the latter of which are made by the women (both high and low caste, but chiefly low caste). Four pairs of grass-shoes or three ropes, each 30 feet long, can be made from two *pakka sérs* of fibre. There is generally a surplus for sale after home requirements have been satisfied, and grass-shoes are procurable in the bazárs of Sultánpur in Kulu and Rámpur in Bashahr at four annas a pair. Ropes fetch less as they require less hand labour and less time to make than shoes.

Wheat and barley.

Sowings of wheat and barley begin early in September in the highest elevation, towards the end of November in the *balh*, and between these dates at intermediate elevations. Similarly, while barley is reaped in the *balh* before the middle of May and wheat less than a month later, the former grain is not gathered till June in the higher lands, and the wheat is often not in before the commencement of the rains. Both benefit in the higher lands by being under snow for a short time, each root putting out more stems in consequence. Excessive snow or rain is liable to cause rust and "bunting." Wheat is the more important of the two as a revenue-paying crop, and occupies more than half of the area cropped in the *rabi* harvest except in Inner Saráj where the areas under wheat and under barley are nearly equal.

This is due to two reasons: the higher elevation of the greater part of Inner Saráj does not permit wheat to ripen in time to be followed by a *kharíf* crop; and besides in that *wazíri* grain is grown more for consumption than for the market, and barley flour is the favourite food of the people. In Outer Saráj a large quantity of wheat is sold, and owing to the low elevation of most of the *wazíri* the grain ripens early. In parts of Outer Saráj it is usual to reserve land for wheat, and so get one good crop of that grain instead of an average yield followed by an indifferent crop of millet: such land while lying fallow in the *kharíf* bears a luxuriant growth of excellent fodder grasses (*suhan* and *kawai*

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Wheat and barley.

being the chief varieties), which are partly made into hay and partly ploughed into the soil as green manure. About half the straw is left on the ground as stubble to be ploughed in for manure, generally being partially burned first.

The opium poppy.

The most paying produce in the *rabi* harvest is opium, but the cultivation and manufacture are laborious. The earlier in November the poppy is sown the better, but a cultivator generally sows several small plots one after the other, so that the collection of the opium may not be such a tax on the energies of his family as it would be if the poppies in all the plots were ready at the same time. The plots are highly manured both before sowing and also more than once after the young plants have come up: frequent weeding is also necessary. The seed is sown in rows, and coriander is very generally sown between the rows; a fringe of barley is often raised along the field so that the barley being reaped before the opium is gathered a path is left by which the field may be visited without injury to the plants. The opium is extracted between the end of May and the end of June according to elevation. When the poppy heads are ready, two or three slits are made in each in the evening, and early next morning the cultivator's whole family turns out to collect the juice which has exuded through the slits. This is of a bluish brown colour; it is taken off with a wooden scraper, or with the edge of a reaping hook and rubbed on to petals which have been kept for the purpose. A number of small balls are thus formed, which are wrapped in poppy leaves and so kept till they are quite dry: both leaves and petals are then removed, and the opium is ready. The same poppy-head yields opium for several days. The removal of juice keeps the cultivator's whole family occupied from early morning till noon, and sometimes all day in the case of a large field. A fall of rain is very injurious at this stage washing away all the exuded juice, and still greater damage may be caused by a hail-storm which sometimes nips all the capsules in a field clean off the stalks. The poppy is not much cultivated in places like Upper Kulu where there is much irrigated land, because the time for collecting the opium corresponds with the rice-planting season, and labour is not available for carrying on the two operations simultaneously. Thus while the percentage of cultivated area under poppy is less than 1½ in Upper Kulu, it is nearly 5 in Rúpi and 2¼ to 2½ in the Saráj tahsíl. The opium of Rúpi is preferred by traders to that of Kulu and also of Saráj. In the more northern portions of the sub-division the drug is produced only in the less elevated villages, but in the Saráj tahsíl, and especially in Outer Saráj, elevation seems to be no obstacle to the cultivation of the plant, and it is grown as high as 8,000 feet above the sea. There

is scarcely a village in the opium-growing *kothis* which does not produce sufficient opium to pay its revenue, and the total value of the annual yield of the drug in the tahsíls is probably double their present revenue.

The opium poppy.

Sarson is largely grown in the *rabi;* it is sown late and reaped towards the end of April. The seed fetches a good price and is exported as far as Hoshiárpur. The oil is largely consumed in Kulu, and also is bartered for wool in Láhul. The Kulu people used to express the oil from the seed themselves, but this industry has now largely fallen into the hands of Aráins settled in the Beás valley. About 5 *sérs* of seed are required to produce a *sér* of oil.

Sarson.

The cultivation of potatoes has been somewhat extended in Rúpi and Saráj since 1891, and there is reason to believe that the sweeter and more prolific yellow variety is supplanting the red. They are grown in the higher villages chiefly in the Sarvari valley; they are sown in April and dug in August.

Potatoes.

TEA.

The cultivation of tea spread into Kulu from Kángra when in 1856 Major Hay, Assistant Commissioner, planted tea plants raised from China seed in rich soil at Naggar at 5,500 feet elevation; in 1860 six acres were planted there. The plants all developed rapidly and in 1856 some of the bushes were 4 feet high and 12 feet in circumference. At Bajaura in the same year three or four bushes growing in garden soil were almost as large as those at Naggar. The latter garden was bought and improved by Major Hay's successor, Mr. Knox, who after his transfer from the sub-division founded the Kulu Tea Company.

The cultivation of tea.

From 1862 to 1870 this company continued by small yearly plantings to increase the area, and after working it for 20 years, at more or less loss, sold it in 1883-84, part going to Colonel Rennick and part to Mr. H. J. Minniken. Another company started in 1866-67 and planted at Bajaura about 5 acres and 2 acres at Dwara, in *Kothi* Baragarh. Later this company not being satisfied with the prospects, sold their property to the Kulu Tea Company. At Dobhi, Mr. Duff, one of the proprietors of the Bundla Tea Company, Pálampur, put out tea from nurseries in 5 acres, and some fine bushes of this planting are still in the Dobhi orchard. In 1875 Mr. H. J. Minniken started a plantation at Aramgarh, Raisan, and extended it to its present area. The total of all areas planted with tea was about 200 acres. Mr. G. G. Minniken is now the only planter who grows tea for sale, and his gardens at Raisan and Naggar aggregate about 36 acres.

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The cultivation of tea.

The tea grown in Kulu is of excellent aroma and flavour. It gained the two first prizes at the Lahore exhibition, in 1866, one for the best tea grown in the Punjab, and the other for the best black tea grown in India. In 1909 it obtained a certificate of merit at the Industrial and Agricultural Exhibition. It has been well reported on by London brokers. In good soil and suitable locality Kulu tea plants grow into bushes producing flushes of leaf, as fast as in Kángra, but the yield in Kulu is much less owing to the irregularities of the rainfall. There seems in fact to be very little land in Kulu well suited for tea cultivation. In the *balh* there is too little rainfall, while north of Raisan the cold water of the sub-soil combines with the strong sun to kill or stunt the young plants. These have to be transferred from the nursery when at last a foot in height, and only the strong and healthy ones should be selected. After transplantation they may be expected to come to perfection in about seven years. The ground should all be hoed over at least three times a year, and the gathering of the crop entails much manual labour: the preparation of the leaf is also a costly and intricate process Much of the land which had been taken up for tea was of inferior quality and not suitable for tea. Government assisted the first beginnings of the tea and fruit industries by reducing the land revenue on the planted areas to Re. 1 per acre. The marketing of tea in Kashmír and Central Asia was also encouraged, but there is now little prospect of success. The trade has to face the disadvantage of great distances from markets, expense in working, and the great fall in price which was brought about by the extension of tea cultivation to Ceylon and Assam. There is little prospect at present of the Kulu farmer taking to tea planting, as the science and skill required is beyond him. Otherwise he might, writes Mr. Minniken, plant bushes along the edges of his fields where the soil is rich, so long as protection is put up against flocks and herds.

The annual outturn was for the most part sold in India to messes and private purchasers, little reaching the home markets. In 1868, at the instance of Major Paske, Deputy Commissioner (who was acting under instructions from the Viceroy), Mr. G. G. Minniken was sent with a quantity of black tea to Leh, with a view to introducing it to the Yárkandi traders, who periodically visit that city. Offers were made by some of these merchants to barter it for *charas*, but negotiations falling through, it was sent to Yárkand and sold there at Rs. 3 to Rs. 3-8-0 per pound. Kángra green tea was also taken up by Mr. Forsyth, Commissioner, to Yárkand. Since 1868 Khampas and other traders have taken to Ladák, Gartok, etc., by the different trade routes increasing quantities of Indian tea, and it is estimated that in 1916-17

The cultivation of tea.

more than 500 maunds of various kinds of tea passed through to Ladák by the Kulu route. It is mostly, however, of a cheap and inferior sort, not likely to enhance the reputation of Indian gardens.

Sugarcane.

Sugarcane is now commonly grown south of the Mahul Khad between Sultánpur and Bajaura, but not in other parts of the tract. The cultivators are mostly Aráins. The cane is very liable to frost and water-logging and no variety has been introduced which is completely frost proof : it is usually a thin crop. The yield of *gur* varies between 6 and 20 maunds per acre.

Rates of yield.

The rates of yield of the principal crops assumed at the Settlement of 1912 were as follows :—

		Sérs per acre.			*Sérs per acre.*
Rice (irrigated)	...	500	*China*	...	200
Rice (unirrigated)	...	370	*Múng* or *Másh*	...	100
Sariára (amaranth)	...	250	Wheat	...	230
Káthu (buckwheat)	...	180	Barley	...	300
Bhresa	...	120	*Masar*	...	150
Kodra	...	320	*Kala*	...	190
Maize	...	400	*Sarson*	...	130
Kangni	...	200			

FRUIT.

History of fruit-culture and its extent.

The climate and soil of most parts of Kulu up to 7,000 feet are suitable for many kinds of fruit. There are indigenous wild apples, pears, peaches, apricots, plums, cherries, currants, raspberries and walnuts. European varieties were apparently introduced about 1870, when orchards were started at Bandrole by Captain Lee and at Dobhi by Mr. Theodore. Kashmír fruit was first planted and English varieties were then grafted on the young Kashmír plants. The garden at Dobhi was acquired by Mr. W. H. Donald and other orchards started, *e.g.*, at Manáli by Captain Banon, at Bajaura by Colonel Rennick, at Katrain and Dhungri by Mr. Duff (followed by Mr. Mackay) and at Raisan and Naggar by Mr. Minniken. There are now 48 fruit planters in the Beas valley, four only of whom are Kanets of Kulu. Information regarding Kulu and Simla fruit-culture was collected in 1894 by Mr. W. Coldstream, I.C.S., and published. Since then a series of new gardens has been planted out by the Forest Department in Outer Saráj. The area under fruit in Kulu now measures about 120 acres and in Saráj about 35 acres. After forty years' working these results seem disappointing and the reason is not far to seek. Kulu is isolated by high mountains which preclude any other form of carriage of fruit

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History of fruit-culture and its extent.

than by coolies, until it reaches the motor road at Pálampur or the rail head at Simla. The time taken up by this method of carriage as well as the jolting involved and the expense of man-handling the traffic for seventy or a hundred miles are very serious disadvantages. Much fruit is also sold in the plains as Kulu fruit which was never produced there, and the reputation of the trade has suffered accordingly. It seems to be an admitted fact that nearly all the area of Kulu and Saráj under 7,000 feet, excepting sun-baked places, could be put under European fruit, and the resulting crop would be sufficient for all the needs of the Punjab at least. The opening up of Kulu by a motor road through the Larji-Mandi gorge would give a stimulus to fruit culture in Kulu which would do much to make this ideal a reality.

The Bandrole orchard.

The Bandrole orchard which lies on an ancient landslip nearly 5,000 feet above sea level covers about 8½ acres of light but rich soil, and is stocked with cuttings and trees obtained from Teignmouth, Worcester and Maidstone, Kent. A great many of the best kinds of fruit which do very well in England were found to be unsuitable for Kulu, turning out stringy, and eventually the following varieties were established on this and most other orchards :—

Apples.—King of Pippins, Autumn Pippin, Hawthornden, Cox's Orange Pippin, Golden Pippin, Golden Reineth, Lord Derby, Baldwin, Blenheim Orange Pippin.

Pears.—Marie Louise, Louise Bonne of Jersey, William, Bon Chrêtien or Bartlett, Bergamotte, Knight's Monarch, Josephine de Malines, Easter Beurré, Passe Col Mar, White Doyenné, Seckle, Duchesse de Bordeaux.

Grapes.—Black Hamburg, Muscat Alexandria, Bowood Muscat.

Apricots.—Yárkandi.

Plums are also grown there with success, but not cherries or peaches, and apricots are a doubtful crop. Captain Lee warned intending growers to make allowances for differences of climate and not to follow too closely the accepted English principles of thinning, root-pruning, etc. It seems, indeed, to be generally accepted that for successful growing of fruit in Kulu, not only must the grower be scientifically trained but he must also have Kulu experience.

Raisan orchard.

The Aramgarh orchard at Raisan owned by Mr. Minniken measures about 16 acres and the same planter has some 3 acres at Naggar : the former garden is stocked with trees from 4 to 30 years of age and the latter is newly planted. Aramgarh is situated at about the same elevation as Bandrole on rather heavier soil and is doing well.

Manáli orchard.

At Manáli (6,400 feet) in the Upper Beas valley Captain Banon has a garden which was first planted about 1884. Most English varieties of apples which were experimented with before 1894 were successful : the trees begin to bear some one or more years before their usual time in England and the fruit ripens also a month earlier. The apples seem to improve as regards flavour, size, and colour as compared with England, but in wet years have a tendency to rot at the core : some become mealy very quickly and easily bruised. Cox's Orange Pippin is recommended more particularly. Pears are not so prolific as apples at Manáli, though they attain a larger size, much finer colour, and (except in very wet seasons) a superior flavour to the same fruit grown in England : like the apples they ripen a month before their usual time in England, and show also the same tendency to decay at the core. Both the native and the English varieties of apricot grow well at Manáli, but the monsoon rains frequently wash all the flavour out of this fruit, cause it to split, and prevent its ripening properly. Apricots do not stand travelling, and must be exported either dried or in jam form. The oil of the kernel (*guti*) is much used as a hair oil and body lubricant. The indigenous peach is also valued for its oil, but the fruit has no flavour. Good peaches have been grown from English stones, but are attacked by disease after 5 or 6 years : the fruit will not bear carriage. The common hill plum, *árú bokhára*, grows freely in the Beas valley, and is useful as stock for grafting English plums, which do very well and bear heavy crops. In fact they are too ready to kill themselves by over-bearing, all except the greengage, which in Kulu is a shy bearer. Cooking plums, such as Victoria, Pond's Seedling, Yellow Magnum Bonum, Denbigh Seedling, and others improve so much in flavour and sweetness that they become suitable for dessert. They cannot however be exported in the raw state. The wild cherry is indigenous to Kulu as elsewhere in the Himalayas : it has no value except as a stock for English cherries, all kinds of which—red, black and white hearts—ripen well at the head of the valley. They are ready early in June, as a rule, and are the first fruit to come into the market, but do not travel very well. The difficulty with grapes is that they are very liable to damage from the monsoon rains and varieties are needed which will ripen either before or after the rains. They are never likely

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to be a great success as they travel badly and require much attention. English figs do fairly well and bear two crops in the year. English red and white currants are successful also, the local varieties being very sour.

Some local indigenous fruits.

Strawberries also grow luxuriantly, but need heavy waterings in the spring : the local kind is good for cooking and preserves. Indigenous raspberries are of three kinds, all edible, and the English raspberry as also the English and the American black berry, spreads very readily and bears in profusion. Quinces (*bidána*) are indigenous to the valley and make capital jam. There are wild mulberries indigenous to Kulu, with an indigenous silk worm but the fruit is of no value. There are wild varieties of almond, pistachio nut, pomegranate and olive, none of which have as yet had scientific treatment; these, with the oranges, grow at lower levels in Saráj and elsewhere. Spanish sweet chestnuts grow slowly but bear very well; the crop is often much damaged by monkeys. The hazel nut grows wild at the higher elevations but is of little value. There are two kinds of walnuts, one with a hard and the other with a thin shell. The latter is called *kághazi* and has an excellent nut. The wood, though not so well grained as in the case of European walnut, is hard and good-looking. The fruit is subject to the ravages of a borer insect. A persimmon has been successfully grown at Manáli, but the fruit is rather insipid.

Dobhi orchard.

At Dobhi Mr. Donald has been very successful with apples and pears. The garden lies north of Raisan at about the same elevation (5,000 feet). English apple-buds sent from Pálampur were grafted by Mr. Theodore on local wild stock (*pala*) about 1870 and have fruited very well. Pears are budded on the wild pear (*shegal*), Japan pear, blackthorn and quince. Those budded on the quince are the most prolific. Mr. Donald favours transplanting of all trees which show a tendency to an excessive growth of wood. The American Wellington peach bears abundantly at Dobhi, and is of good size and quality, but will not keep.

Ani orchard.

At Ani in Outer Saráj (3,400 feet) fruit cultivation was begun by Dr. Carleton of America. He was successful with Kashmír apricots, American grapes, walnuts, and oranges. The oranges were Maltese. The trees have however shown a tendency lately to bear small fruit in great profusion and die off. The reason is said to be that the sub-soil was not deep enough. A new young orchard of orange trees has now been planted, after blasting of large holes for the roots. Apples do not do well at Ani.

Forest Department fruit culture.

The Forest Department have lately made a serious attempt to introduce fruit cultivation in Outer Saráj for the Simla

market, as a paying undertaking in itself, and in order to encourage the local peasants to improve their financial position by trade. Gardens aggregating 25½ acres have been established at various places chosen for their proximity to the Simla road or scattered about at different elevations and with various aspects in order to cover the tract as much as possible and to show by experiment the best situations for orchards. Forest Ranger Lála Gurándittа Mal was deputed to Pusa for special training and the work was started on his return in 1910: he has been for many years in Outer Saráj and has had an excellent opportunity for bringing the scheme to success. Three orchards were started early in 1911 and 3 more in January 1912. The principal garden is at Báhu near Chawai on the Simla road. It covers 6 acres, at an elevation of 5,000 feet. The trees planted include apples, pears, plums, peaches, nectarines, apricots, figs, oranges, sweet limes, Kulu limes, loqats and cherries. Of these, oranges, peaches, and apricots fruited in 1916. Another orchard is situated at Nigali, 3 miles from Ani, at 6,150 feet; it measures 6 acres, and has a good prospect of success. Other gardens are at Karana, west of Ani, Dhaugi near Chawai, Urtu in the Kurpan valley, and Dim in Kothi Kot. Eleven kinds of apples, one pear, an apricot, ten peaches, four oranges, and varieties of other fruit trees have been imported from Australia, a somewhat novel feature of fruit culture in Kulu. The expenditure has up to 1916 amounted to some Rs. 12,000 and the main outlay has now been faced: the gardens promise to pay well and to be of much assistance to the local country folk.

Forest Department fruit culture.

The prospects of the fruit industry in Outer Saráj depend on the degree of success obtained in selecting the right varieties and on careful attention to the gardens: the market is assured, but the fruit will have to compete with Simla Hills fruit which has not so far to travel. The opening up of Kulu is the chief factor which will influence the Beas valley industry. The people are taking to grafts more kindly than in the past, and it is perhaps not too much to hope that a school for instruction in fruit culture will at some future date be opened.

Prospects of the industry.

In *Wazirís* Parol, Lag Sari and Lag Mahárája, the increase in cultivation between 1891 and 1912 amounted to nearly 13 per cent. By breaking up Government waste on permission of the Assistant Commissioner 698 acres have been added to the cultivation in these *wazírís*: the rest of the increase is due to the cultivation of waste recorded as the property of the cultivators in 1891, to the new cultivation of the areas for the revised records of 1912, and to unauthorised extension of field boundaries into undemarcated waste. The irrigated area has increased in the

Increase of cultivation.

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Increase of cultivation.

records by 3 per cent.; there has been a real increase in Lag Mahárája, the rest being due to re-mapping. It seems impossible now to extend irrigation and there is little suitable waste available for cultivation.

In Tahsil Saráj the cultivated area, as recorded, increased by 8 per cent.: but most of this is due to map correction. The irrigated land in Outer Saráj increased by 117 acres and beyond this amount, the extension of cultivation in Saráj is in the poorest of land.

In Rúpi the cultivated area increased by 13 per cent. between the last two settlements. A considerable portion of this extension is within proprietary holdings, but 607 acres have been broken up out of the waste.

There has been no widespread improvement in the quality of crops by selection of seed, nor by introduction of new varieties (except in the case of maize), or of new appliances. Attempts to encourage the cultivation of soy beans have proved a failure.

CO-OPERATIVE BANKS AND GOVERNMENT LOANS.

Co-operative credit has only recently begun to make its appearance in Kulu. In 1915 three banks were established as follows:—

Situation.	Number of share-holders.	Capital.
		Rs.
Baragarh (Katrain)	19	371
Raisan	26	288
Kais (Sultánpur)	27	562

The rate of interest charged is Rs. 9-6-0 per cent. and the shares are Rs. 5 each. The movement has made a satisfactory beginning.

Takkávi is not popular in Kulu, owing to the ignorance of the average peasant and the control exercised by local money-lenders.

ALIENATIONS AND PRICE OF LAND.

The average price of land sold in Upper Kulu during the period of the first revised settlement (1871-91) was Rs. 27 per acre. Since 1891 rather less than one-tenth of the cultivated area had been sold in 1912, at an average price of Rs. 85 per acre. The average rates were Rs. 104 in Parol, Rs. 119 in Lag Sári, and

Rs. 44 in Lag Mahárája, or, respectively, 47, 64, and 37, times the all-round rate of the land revenue. In Lag Sári the average price was exaggerated by the sales of small plots near the Sultánpur *bázár* and in all the *wazíris* by the prices recorded in case of sales to money-lenders. It is now very difficult to buy land in Kulu, and the price bears no relation to the profit to be made of it. The average price recently paid for irrigated land runs from Rs. 118 per acre in Lag Mahárája to Rs. 194 in Parol, and for unirrigated land from Rs. 47 to Rs. 93. Of the total area sold between 1891 and 1910 (3,344 acres), only 104 acres passed into the hands of money-lenders, the greater portion (1,880 acres) being sold to *zamíndárs* of the *pháti* at an average price of Rs. 74 per cultivated acre. Three per cent. of the cultivated area was in 1912 under mortgage, the mortgage price working out to Rs. 73 per cultivated acre. In the high-lying villages transfers are few, partly because the inhabitants are thrifty, and derive a fair income from their sheep, and partly because the fields are too remotely situated to be much sought after. Childless widows seeking to convert their life interest in their husbands' land into cash, or to transfer it to their paramours or relatives, and old people genuinely anxious to provide for their last remaining days (being neglected by their heirs) are responsible for many of the alienations.

As in Kulu Proper, the price of land in Saráj has generally little connection with the profit to be made of it. During 1891—1910 less than one-twelfth of the cultivated area was sold, at an average rate of Rs. 72 per acre, or 66 times the all-round rate of incidence of the land revenue. Taking irrigated and unirrigated land separately, the average price of the former in the same period was Rs. 177 per acre and of the latter Rs. 61 per acre in Outer Saráj. In Inner Saráj the rates were Rs. 39 and Rs. 74, respectively: 113 acres, of which 98 were in Outer Saráj, had been sold to money-lenders. Of the cultivated area, 7½ per cent. was in 1910 found to be mortgaged, the rate of the mortgage money being on the average Rs. 51 per acre.

In Rúpi during 1891—1910 less than one-tenth of the cultivated area was sold. The prices averaged out at Rs. 57 per acre. Where unirrigated land alone was sold, the average price was Rs. 52, of rather more than the price of *báthil* in Lag Mahárája, but less than the price in the Upper Beás Valley. Four per cent. of the cultivated area was found to be mortgaged, in 1910, at an average mortgage price of Rs. 48 per cultivated acre.

VETERINARY.

Veterinary.

The Veterinary Department have only recently begun operations in Kulu and not much progress has yet been made.

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Veterinary.

The rinderpest disaster of 1890-91 was the occasion of the first visit of a veterinary assistant and he returned as soon as the epidemic was controlled. In 1906 a temporary dispensary was started, but it was not until 1914 that a regular hospital was established. A good building for in-patients has now been erected at Kulu, with a dispensary, quarters for the assistant, and an operation shed. The Chief Superintendent toured in Kulu in 1913—15 and stimulated interest in the work of the department, about 500 cases of diseases among sheep and goats being treated on tour, but it will take years probably for the people to alter their ways and adopt modern methods. There were only three castrations in 1916, and ten in-door patients: on the other hand the belief in the value of the medical work of the department is growing and there were 2,372 out-door patients treated at Kulu, besides 690 on tour: 602 of the latter were for contagious diseases.

Breeding experiments.

Attempts have been made to introduce merino-breeding, but the results are disappointing in view of the expenditure incurred. The difficulty of inducing the owners of flocks to keep the merino rams and the half or three-quarter bred flocks entirely separate has caused many failures.

Experiments with Hissar and Brittany cattle have been succeeded by attempts to breed from Montgomery bulls, but little success has been attained as yet.

DOMESTIC ANIMALS.

Diseases of domestic animals.

The chief diseases among cattle and flocks are—

(1) foot-and-mouth—locally known as *kharog marog*. This attacks large numbers of animals.

(2) rinderpest—*gargandh*: there has been no outbreak of this pest since 1891.

(3) hœmorrhagic septicæmia—called *ghutu*.

(4) sheep pox—*paniáli*.

(5) mange—*charrar*.

(6) *photka*—lung disease which attacks goats only, and sweeps off large numbers: the number of goats has been very much reduced of late years in consequence of this disease.

Maggots in wounds and the vagina are common, also diseases and malformation of the feet, and breaking of limbs, owing to the rough journeys made by flocks. Excessive consumption of *niru*

grass on first arrival at the high grazing grounds often causes Tympanitis in sheep and goats and fatal results usually follow.

Diseases of domestic animals.

Cattle.

The cattle of Kulu and Saráj are small and hardy animals, usually nearly black in colour, and standing from 7½ to 12 hands in height. They are inclined to be dull: the horns and ears are small and the body well-shaped and strong. The bulls are not mulled till they are 4 years old when they are ready for training as plough-bullocks: they then give six or seven years' good work and as much more again if carefully fed. But there is much mortality owing to the difficulty of feeding the cattle in the winter. The cows give very little milk, from ½ to 1½ seers daily, and are kept mainly for manuring the land and breeding. The milk not required for curds is made into *ghi* and sold usually at one seer per rupee, which is 100 per cent. dearer than when the Gazetteer was last edited. The animals are kept in the room which forms the ground-floor of a Kulu house, and from which light and air are carefully excluded, the people considering warmth and protection from wild beasts preferable to ventilation. Whatever may be said in favour of this practice, it has undoubtedly something to do with the occurrence of epidemics such as the rinderpest of 1890 and the foot-and-mouth disease which appears annually.

There is no systematic breeding of cattle, and the Montgomery bulls introduced by the District Board were not popular, owing partly to the idea that cross-breeding will produce bullocks without humps and therefore useless for ploughing, but also because hill cows are too small for mating with down-country bulls: a large size of bullock is also useless for the steep hillsides. The best hope for improving the hill breed and maintaining it seems to lie in selection from local bulls and rigorous castration of the unfit. This policy is however impossible until the conservatism of the people gives way. A lavish expenditure on cattle fairs and rewards for breeding might in time produce some effect, but there is much opposition to the modern humane method of castration, though it is practised in Láhul. At present the sires are all immature and none are kept for breeding proper. The breeding is merely an incident in the period of growth of a plough bullock and far too many bulls are allowed in each herd.

The cattle kept by Aráíns and others in the lower Beas valley are obtained from Suket and are of medium build and active. There are fair milkers to be obtained sometimes at these lower levels.

The price of a hill bullock is from Rs. 15 to Rs. 25, cows fetching from Rs. 10 to Rs. 20. But much more is paid for the Suket cattle near Bajaura, which cost up to Rs. 40 each. There is no cattle-

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Cattle.

fair. A large number of cattle are imported annually from Saráj and Suket and Mandi into the Upper Beas valley (Ujji) to replace the casualties due to bad feeding in the winter.

Difficulty of feeding animals.

In the winter and spring there is often a great scarcity of fodder, especially if the monsoon has been weak. The cultivated area is too small to allow of much in the way of fodder crops. Particularly in the Upper Párbati valley, hay is difficult to make owing to the monsoon rains and the short ripening season for crops. Grass is therefore left to wither as it stands on the hill-sides, and this (known as *hulái*) is particularly indigestible and devoid of nourishment: it is used only when all else fails. The feed for the winter and spring, for cattle, consists of hay (*bája*), rice-straw (*parál:* the stack is called *paráli*), wheat and barley straw (*thuja*), and the leaves of *bán* and *morhú* oaks. *Khárshu* or brown oak is eaten only by sheep and goats. Mulberry leaves (*chún, chimo*) are given to young sheep and goats as the noonday meal in winter and spring. Flocks stand a much better chance of surviving the lean days than cattle : they can eat the leaves of bushes which appear in the spring before the young grass comes on, they can climb to places where cattle cannot penetrate and they go in large numbers to the lower hills in the cold weather.

Ponies and mules.

There is no distinct Kulu breed of ponies or mules : there are numbers of both in Kulu especially in the winter months, but they are all imported, the ponies from Yárkand, Zángskar, Láhul, Spiti, and Ladák, and the mules from down-country. The prices of ponies vary from Rs. 50 to Rs. 250 according as they are for pack or riding. Good riding ponies are hard to obtain, owing to the lack of organised breeding. Mules fetch from Rs. 150 to Rs. 200.

Buffaloes.

Buffaloes are not kept by the Kulu people, except to a very limited extent in the neighbourhood of Bajaura and in the lower parts of Outer Saráj ; and the nomadic Gujars of Mandi and Kángra Proper have not established a right to bring their buffaloes into the sub-division to graze. The provisions of Mr. Anderson's Forest Settlement contemplate their entire exclusion, but the Forest Officer has a discretionary right to allow a certain number of buffaloes to graze in undemarcated waste under conditions laid down in the rules made under Section 31 of the Forest Act.

Sheep and goats.

The Kulu sheep are smaller than those of Europe or the pack-sheep (*biáng*) of Tibet, and both sheep and goats are of the type generally found in the Himalayas. The wool is of short staple owing to the frequent shearing which is necessitated by the exuberant growth in waste land of thorns and burrs which stick into the fleeces. The mutton is also poor in quality owing

No. 7. The Párbati Valley.

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Sheep and goats.

to the constant shifting of the flocks from pasture to pasture, at widely distant places and all levels from 2,000 to 15,000 feet above the sea. The shepherds are usually hirelings and the Gaddi shepherds, who all own their flocks, are not resident. The Kulu shepherds choose as cool and dry a climate as possible and have invented the theory (largely for their own convenience) that the flocks must have, in addition to plenty of grazing, at all times of the year a cool but not too cold or damp climate, regardless of the fact that sheep and goats flourish alike on the burning plains of Hissar, on the cold wind-swept plateaux of Tibet, and in the rain-sodden valleys of Sikkim. The difficulty of feeding flocks in winter also causes much migration. The flocks of sheep and goats are therefore kept constantly on the move, with the result that the quality of the mutton is affected and the animals suffer very much from wounds in the feet, and broken legs. The shepherds (*phuwál*) are quite indifferent to the sufferings of their charges and do not treat even minor ailments. Besides being of short staple, the wool of the sheep is coarse and no trouble is taken at shearing-time to separate the finer parts. The goats produce no *pashm* or soft under-wool, such as is furnished by the little *chigu* goats of Tibet. The flocks, however, form a most important factor in the domestic and economic life of the people.

Increase of flocks and prices.

The numbers of sheep and goats have only increased by some 17,400 head since 1891. This is by no means a large amount on a total of 2¼ lakhs and represents an annual increase of only ½ per cent. The prices however have gone up enormously of late years, and goats cost more than sheep. He-goats fetch Rs. 10 to Rs. 12, and she-goats Rs. 6 to Rs. 7 : rams cost Rs. 6 or Rs. 7 and sheep Rs. 3 to Rs 5. In the Párbati valley owing to the large demand by timber-floating gangs in the pay of Forest companies, the price of sheep has gone up to Rs. 10 or Rs. 12.

Sheep-runs, and rights and customs of shepherds.

In the winter the sheep and goats of the higher *kothis* are driven down to the pastures of the lower *kothis*, or even further to grazing grounds in the lower Hill States. There they pay at various rates, which in Mandi are as follows :—Annual leases are usually taken of defined grazing grounds, otherwise fees are paid at the rate of Rs. 9-6-0 per hundred for both sheep and goats. In no case is the contract money less than the fees according to this rate, and it is usually considerably higher. In addition Re. 1 is charged for the *patta*, or document conferring the lease, and *rahdári*, or grazing fees on moving to and from the grazing grounds is charged at Rs. 2 per flock, which it is proposed now to reduce to Re. 0-12-6. The *tirni* or grazing fees in Kulu are described below. The distribution of the sheep and goats (including lambs and kids) during the winter was ascertained in

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Sheep-runs, and rights and customs of shepherds.

1912 to be as follows :—

	In Native States.	At home.	Total.
Kulu proper	31,147	87,407	118,554
Rúpi	18,911	26,334	45,245
Saráj	6,436	69,308	75,744
Total ...	56,494	183,049	239,543

On the other hand, some low-lying runs in Pandrabís *kothís* on the Sutlej are grazed in the winter by shepherds from Bashahr. There is a considerable amount of mutual grazing along the Mandi border, which is not taxed.

The rams are kept at home till February, when they are brought down to the lower pastures, and let loose among the flocks. In the following month all the sheep and goats are driven home to pass the spring lambing season in the neighbourhood of the villages of their proprietors, and they remain there till the middle of June, manuring the rice and Indian-corn fields. They are then taken further up the hillsides to the *gáhrs*, pastures in the forests at about 8 to 11 thousand feet elevations. The pastures, large open glades among the trees, are more properly called *thách*, which word is also applied to the level space in which a flock is penned for the night. In July when the rains have set in or are about to commence, the flocks are driven still higher up to the *nigáhrs*, the sheep-runs on the grassy slopes above the limit of forest growth. The best of these are in Láhul, and will be alluded to again in Part III of this work; the almost rainless climate of that tract is very healthy for sheep in the summer, and more than half the sheep and goats of the Kulu tahsil are driven there, as well as the flocks of the Gaddi shepherds who have a right of way through Kulu thither from Kángra. The *nigáhrs* of Kanáwar and Sehnsar *kothís* in *Waziri* Rúpi and of Shángarh, Tungand Nohanda *kothís* in Inner Saráj, situated towards the sources of the Párbati, Sainj and Tirthan rivers in the high range between Spiti and Kulu, rank next in excellence; the rainfall there though almost continuous throughout the monsoon takes the form of a thin drizzle or "Scotch mist," favourable to the growth of nutritious grasses and not unhealthy for the flocks. The Rúpi *nigáhrs* are resorted to not only by the shepherds of the *waziri*, but also by men from Saráj and from Suket, who have always paid fees for the privilege to the *jágirdár* or to Government; some Suketars also visit the Inner Saráj *nigáhrs*. The remaining high

Sheep-runs, and rights and customs of shepherds.

pastures of Kulu are inferior; the slopes of the snowy range lying above the forests in other parts of the country are rougher and less extensive, and above all they are exposed to a much heavier rainfall.

The distribution of the flocks of the sub-division in the summer was as follows in 1912:—

Name of tract.	Grazing in Láhul and Spiti.	Grazing in Rúpi *nigáhrs.*	Grazing in the home *nigáhrs.*	Grazing in Inner Saráj *nigáhrs.*	Total.
Kulu proper ...	68,330	66	50,158	...	118,554
Rúpi ..	1,464	18,321	25,460	...	45,245
Saráj tahsil ...	3,060	18,632	34,220	19,832	75,744
Total ...	72,854	37,019	109,838	19,832	239,543

The flocks remain in the *nigáhrs* till the end of the rainy season, about the middle of September, and are then driven back again to the *gáhrs* where they graze till the cold becomes severe, and drives them down first to the villages of their owners and thence to their winter quarters. In this interval they manure the fields which are being prepared for wheat and barley. The *gáhrs* are generally deserted about the beginning of November. It is the autumn grazing for which the *gáhrs* or *tháches* are valued, and in this season they are grazed only by the shepherds possessing exclusive rights in them, whereas in the spring they are open to all the flocks moving on towards the higher pastures.

Both *nigáhrs* and *gáhrs* have tolerably definite boundaries, which are recognised by the shepherds, who hand down the knowledge of them among themselves. A sort of hereditary title to or interest in each is asserted by some man or other. He is known as the *rású*, and bases his claim upon a grant from the Rájás, but can rarely or ever produce a deed or *patta*. Sometimes he is a resident of the *kothi* in which the *nigáhr* is situated, and sometimes he is a man of a distant *kothi* in which there are probably no *nigáhrs*, as the mountains are not high enough. At the Forest Settlement the *rásús* in all cases admitted that they were mere managers, but alleged that no one could graze his sheep in the runs in a flock separate from that established by the *rásús*, and that was generally admitted by the people. They get no fees from those whose flocks go with them, but food for one dog is given, and at the union of the flocks and just before their separation the sheep are penned for a night or two on the *rásús'* fields. Some of the *gáhrs* or lower runs have been included in the first class forests, but most of them and all the *nigáhrs* are in

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Sheep-runs, and rights and customs of shepherds.

the second class forests. In the lowlands in and around the villages the sheep graze promiscuously like the cattle. Ordinarily speaking, a flock belonging to a man of one *kothi* would not be driven to graze in another, but within the *kothi* he may drive them where he likes, without reference to *phati* boundaries, or nearness, or the contrary, to his own hamlet; and in waste lands near the boundary of two *kothis*, the neighbouring hamlets on both sides frequently have a common right of grazing.

Payments for grazing and browsing of flocks.

In many places a gift of grain, or a goat, or a small sum of money, is given to the local *deota*, but this cannot be considered a payment for the grazing, but merely an offering to propitiate the deity and prevent his doing injury to the flocks while they remain in his haunts. In the times of the Rájás, and down to the Regular Settlement, a tax was levied on all sheep and goats in Kulu at the rate of one anna per head per annum. This tax was collected in instalments of one-third in the spring and two-thirds in the autumn. It was on account of the grazing for the whole year, and therefore no special rents or dues were imposed on the *nigáhrs* or summer sheep-runs. At the Regular Settlement of 1851 the tax was deemed to be included in the land revenue assessed on the sub-division, and this arrangement was continued at the revision of settlement of 1871. In 1891, however, the new land revenue assessment then made was accepted by Government as including all that could fairly be taken as land revenue for all rights in the land owned by the people, but with the reservation that it was not a full assessment in respect to sheep-grazing rights, and should be supplemented by a light additional charge to be specially levied on sheep and goats.

In determining the amount of the charge, account was taken of the profits derived from sheep farming, and for collection the principles followed were—

(1) the *tirni* or grazing tax on local flocks was assessed in a lump sum on the basis of the enumeration made in 1891, to be the annual demand for ten years, at the end of which period a new enumeration and assessment were made. The collections were carried out by Negís who received 5 per cent. as remuneration :

(2) the dues levied from foreign shepherds were determined annually by enumeration :

(3) the *jágírdár* of Rúpi was allowed to make his own arrangements for collection of the additional rates for high pasture grazing and special dues for winter grazing on account of flocks from outside.

Payments for grazing and browsing of flocks.

In 1913 Government sanctioned new rules as follows:—

(*i*) on account of sheep grazing within the owner's *kothi* the prevalent rate of Re. 1-9-0 per hundred was retained:

(*ii*) on account of goats, grazing within the *kothi*, the rate was raised to Rs. 2-5-6 per hundred:

(*iii*) the additional rate for grazing in the high pastures of Rúpi and Saráj remained at Re. 1-9-0 per hundred for both sheep and goats:

(*iv*) the sum obtained by applying these rates to the figures of the last census was fixed as the annual demand for five years:

(*v*) the demand for five years on account of the high pastures in Saráj was fixed in the same manner:

(*vi*) for the high pasture grazing in Rúpi the Rái was allowed to collect Re. 1-9-0 per hundred on account of the sheep and goats of Rúpi and the *khálsa wazíris* in Kulu and Saráj. He was given the choice between (*a*) fixing the demand for five years or (*b*) collecting by annual enumeration:

(*vii*) on foreign sheep coming to Kulu for grazing the *tirni* was fixed at Rs. 3-2-0 per hundred and on foreign goats at Rs. 6-4-0 per hundred:

(*viii*) the Nègís appropriate as before 5 per cent. of their collections of *tirni*:

(*ix*) foreign shepherds (Gaddís) who merely pass through Kulu enjoy as before a free passage unless they break rules, when they become liable to *tirni*:

(*x*) no tax is levied on Láhula and other regular traders and the proposal that nomads should be taxed was dropped:

(*xi*) the rates were fixed for the term of settlement, except that those for goats grazing within their *kothis* were to be re-considered after five years.

The income for 1915-16 amounted to Rs. 766 on account of the *khálsa kothis* and to Rs. 817 on account of the *jágír kothis* of Rúpi. The income from fees of all kinds taken for grazing in *khálsa* runs is credited to Forest Revenue, and amounted in 1916 to Rs. 3,784.

CHAP. II. Section A. — Irrigation.

The percentage borne by the area *artificially irrigated (known as ropa* in Upper Kulu and as *kiar* in Outer Saráj) to *the total cultivated area is* 13·8 *in the richer wazírís* of Parol, *Lag Mahárája aud Lag Sári*; 4 in Rúpi and in Outer Saráj, and ·8 in Inner Saráj. Most of the *ropa* of the Upper Beas valley lies in the plateaux referred to in the general description of the tract; and in Rúpi the best irrigated land is found on the margin of the Beas, though there are patches in the Párbati, Hurla and Sainj valleys. In Inner Saráj the *ropa* lies in patches on the banks of the Sainj and Tírthan, and is watered from small streams which are full only when the monsoon rain is sufficient. In Outer Saráj there is much good irrigated land on the banks of the Kurpan and there are plots on the margin of the Sutlej and in the Báwa Gád valley which are of very fair quality. Rice is the only crop grown in such land in the *kharíf* harvest. A *rabi* crop is grown in it wherever the aspect and elevation permit the crop to ripen before the commencement of the rice-planting season; in the lower rice lands wheat fulfils this condition, and is preferred as it is more valuable than barley, and in Outer Saráj the poppy is also grown, but in the higher lands only barley can be obtained. Water is not supplied from the canals to the *rabi* crops in irrigated land except in seasons of very exceptional drought. The rice-land is carefully terraced into level fields, and resembles a flight of large, broad steps. The canal cut which supplies the water for irrigation is often brought from a long distance, and having its head high up the valley of the torrent which feeds it, has sometimes to be conducted by means of wooden aqueducts round cliffs and across streams. If it falls out of order the work of many hands is required to put it in repair, and there is an organized system of long standing for collecting labour. Each canal (*kúhl*) has four officials, a *darogha*, a *jatáli*, a *dhonsu*, a *lándu*. When a canal requires repairs, the *darogha* or superintendent gives the order to the *jatáli* (messenger) who goes round with the *dhonsu* (drummer) and collects the labourers; each family getting a share of the water has to furnish a man. The gang march to the canal together: any one not joining before they reach the ground is fined two *pathás* of grain, and if he is absent the whole day, four *pathás*. It is the duty of the *bándu* to collect these fines, but his special business is to superintend the daily distribution of the water, like the *koli* in Kángra. He, in fact, is on permanent duty while irrigation goes on; the other officials attend so long only as work on the canal is in progress. The *darogha* gets a little grain by way of pay; the others undertake their duties in lieu of working with spade and shovel. The fines are eaten up at a feast held when the work is concluded. The dam of a *kúhl*,

which is called a *ban* or *dang* in Kángra, is termed *ár* in Kulu; the mouth or opening into a *challa* or duct from a *kúhl* is called an *óës*; the opening from a *challa* into a field, a *sharálan*.

Irrigation.

Rice lands need constant irrigation as the water if allowed to stand too long becomes warmer than is considered beneficial to the crops. The *kúhls* below Sultánpur are also generally used to the limit of their capacity during the growing seasons for both *rabi* and *kharíf* crops. In shaded valleys, the situation is often too cold to allow of irrigation, and unirrigated crops in most parts of the tract are fairly secure. There is no lift irrigation and there are no wells: flow irrigation from springs and streams is alone employed.

The fishing industry has been mentioned under the head of Fauna in Chapter I (page 13). There are regularly recorded rights of fishing and quite a fair living is made by netting below the Akhára Bridge in the Beas and the *kúhl* intake in the Sarvari, nallah.

SECTION B.

RENTS, WAGES, AND PRICES

Rents.

Rents in Kulu are generally governed by custom and are not as a rule true economic rents. Rent by division of produce is hardly ever less than one-half. Rents of good lands in the Beas valley, as collected by European land-owners, are full fair rents and amount in *wazíri* Parol to Rs. 11 per acre on *ropa* and Rs. 6-0-2 on *báthil*. In Lag Sári the figures are Rs 12-9-0 and Rs. 6-7-0 respectively, in Lag Maháraja Rs. 9-15-0 and Rs. 6-2-2. Cash rents in other parts of the tract are not of much value as guides for estimating the economic rent, in Rúpi Rs. 5-0-9 is the average rent paid on *ropa* and Rs. 4-1-3 on *báthil*. In Inner Saráj these figures respectively are Rs 4 and Rs. 3-1-7, in Outer Saráj Rs. 4-12-7 and Rs. 2-4-7. Cash rents are only displacing rents in kind on lands owned by Europeans.

Wages.

The people do not take Government service, and if a man is urgently in need of money he works for one of the forest companies in Kulu, Mandi, or Jammu. If he is young and strong he can earn by job work as much as 12 annas per day for carrying scantlings. This means very hard labour, however, and 6 or 8 annas a day is the average earning of a wood-carrier. Sawing timber is much more profitable, as much as 12 annas being easily earned, and quite commonly Re. 1. The net earnings of a sawyer have been estimated at Rs. 15 to Rs. 20 a month. Regular wages at Rs. 8 per month are obtained in the Forest Department and on District Board roads: the Public Works Department pay a rather higher rate.

CHAP. II. Section B.

Wages.

*There is no menial caste in Kulu corresponding exactly to those of the plains. In Kulu Lohárs, Chamárs, etc., are land-*owners, like Kanets, and ordinarily menials are paid for the job by the person who employs them. Certain allowances are however recognised as customary by such *zamíndárs* as can afford to give them. It is impossible to make an estimate of these earnings which would be at all accurate. Masons and carpenters are also usually paid by the job. Rs. 10 to Rs. 12 is paid to Lohárs or masons on District Board roads. Carpenters can be hired for Rs. 25 to Rs. 30 per mensem.

Prices.

Prices have altered very materially since 1891, and especially since the earthquake of 1905. There are no "Gazette prices" in Kulu and no regular market prices, in a tract where commercial enterprise is confined to a few immigrant shop-keepers. It was found in 1910 that the *wazíri* records in the *lal kitáb* were unreliable, and did not touch certain important crops. The small shop-keepers to whom peasants sell their grain do not keep regular accounts, and never fix periodical lists of rates (*nirkh*) for their transactions. Naturally, prices rule much lower after harvest than at other times of the year, the variation being often more than 25 per cent. The grain sold to pay the land revenue fetches, of course, the lower price. Certain grains, which have good keeping quality (*e.g.*, buckwheat and amaranth), are hoarded to guard against calamity, not often primarily for profit. On the other hand in 1905 many peasants made large profits by selling their hoards at the extravagant rates prevailing after the earthquake of that year, and the richer ones have certainly learnt to hold up grain against a rise in its price. The grain-dealers (*banias*), employed by wood contractors in Kulu forests, buy in irregular quantities from peasants. They often have a surplus stock to dispose of and import this, along with grain bought at favourable rates, or in pursuance of other business, in the plains. Another reason for this import is that a certain supply on a given date is not to be depended on in Kulu. Extracts were however made in 1910 from books kept by *banias* at Katrain, Naggar, and Maníkaran, showing prices at which grain was valued in dealings with *zamíndárs* since the previous settlement. It was generally admitted that prices were higher in 1891 than the rates adopted then and that they remained at a very low level until the time of the earthquake, after which an extraordinary rise took place. This was only natural. Sultánpur was destroyed by the earthquake, stores of grain were buried and lost, terraced fields collapsed, the harvest was below the average. Then the valley filled with imported labourers, and the food supply was unequal to the demand. Prices doubled and trebled, and before they could fall again,

there came a year of scarcity in Kángra, Mandi, and Suket, and famine in Saráj. The Kulu people profited greatly by this scarcity: the country is far from large markets, and prices have been maintained at the same artificially high level.

For the purpose, however, of valuing the "half-net assets" (that share of the outturn which may legitimately be taken by Government) at the re-assessment of the land revenue, a very much lower range of prices was assumed in 1912 than the prices found to be actually prevailing, in view of the possible subsidence of this artificial inflation. Separate calculations were made for Kulu proper (Upper Kulu and Rúpi) and for Saráj. The following tables show the prices assumed in 1891, those prevalent before and after the earthquake, and the prices assumed in 1912. The figures in each case represent annas per maund:—

Grain.	Assumed in 1891 (annas per maund).	For Kulu and Rupi.		Assumed in 1912.
		Ten years' average before earthquake, 1895—1904.	Five years' average 1905—09 (*rabi* crops 1905-10).	
Unhusked rice ...	16	24·5	32·8	23
Sariára (amaranth) ...	14	21·8	35	20
Káthu (buckwheat) ...	13	20·1	24·6	17
Bhresa	17	24·4	32·6	21
Kodra	14	17·1	28·6	16
Maize	14	16·3	30·4	19
Kangni	20	21·2	35·6	23
China	16	20·8	34	21
Wheat	18	27·3	42·16	28
Barley	14	19·3	30·16	20
Masar	26	38·2	49	40
Sarson	30	47	69	40

In Saráj prices rule uniformly higher than they do in Kulu proper, but the variations from tract to tract are even greater than in Kulu. Most of the buying and selling in Inner Saráj takes place at Banjár, and there is also a market at Sainja. In Outer Saráj produce is disposed of at Chunagahi and Nírmand which are markets for the more prosperous parts of the sub-tahsil: prices are affected here by the vicinity of Rámpur Bashahr where there is at times an urgent demand for grain.

CHAP. II. Section B.

Prices.

The comparative table for Saráj is as follows: the lower line of figures in each case represents Outer Saráj and the upper line Inner Saraj:—

Grain.	Assumed in 1891 (annas per maund).	For Saraj. Average 1895—1904 (before earthquake).	For Saraj. Average 1905—09 (rabi grains 1905—10).	Assumed in 1912.
Unhusked rice ...	18	29·9 27·4	61·8 48·4	26
Sariára (amaranth) ...	15	23 24·8	41·2 41	22
Káthu (buckwheat) ...	13	23 24·8	37 37	19
Bhresa	27	23 24·8	37 44·4	22
Kodra	15	20·1 24·9	39·4 40·4	20
Maize	16	21·2 25·2	44 48·2	22
Kangni	18	24·3 25	43 41·6	23
China	16	24·2 25·9	41·2 41·6	22
Wheat	20	31·4 34·5	46·5 51·5	30
Barley	15	20·3 28·8	38 35·4	22
Masar	27	43·3 49·4	62 65·8	40
Sarson	28	47·1 48·8	77 77·4	42

The above include the more important food-grains, but separate prices were also assumed in 1891 and 1912 for *mung*, *másh* and other *kharíf* crops, while valuations per acre were

taken for the remainder : details of these are noted in the Settlement Report of 1910—13.

Prices.

The price of opium is a most important factor in the economic life of those *kothis* where it is grown : it is mainly used to pay the *rabi* land revenue instalment due in August and in many parts that payment could not be made without growing the drug. The profits of the cultivation have therefore been treated very leniently by Government and were not considered in framing the soil rates at assessment. The value of the crop was assumed to be Rs. 24 in 1891 and Rs 39 in 1912 and the tax imposed was Rs. 2 per acre in the former year and Rs. 9 in the latter : this was paid by the cultivators. Latterly, however, the minimum tax was that of one-eighth of an acre, and as many licensees cultivate smaller plots the incidence in 1912 worked out at over Rs. 12 per acre. Profits of cultivation increased during the term of Settlement, 1891—1912, by about Rs. 5 per acre. In 1914 the acreage tax was levied for the last time and in 1915 an export duty was substituted. payable by the wholesale dealer at the tahsil. This duty is now Rs. 8 per *sér* and part of it is paid by the cultivators in the form of a decrease of the market price, which now averages Rs. 11 per *sér*, though debtors frequently have to sell at Rs. 8 to their creditors, especially in Outer Saráj. On the whole the dealers have the advantage in the haggling of the market as they know that most cultivators are unable to hold up stocks of opium.

Material condition of the people.

In a non-commercial country, as Kulu is, it is impossible to estimate the average expenditure on food, clothes and housing. The Kulu man lives on his land and the forests, eking out their produce by taking to coolie labour when necessary. In the broad rice-lands of the Upper Beas the country-side is generally much better off than in the sunless valleys of Rúpi, the dry tract below Sultánpur, or the narrow glens south of Bajaura. The Parol people have better houses than formerly owing to more abundant timber and the use of the saw : they have more fruit than the rest of Kulu and sewing machines are increasing in numbers, showing that a certain rise in the standard of comfort has taken place : they still consume large quantities of alcohol and the local supplies of illicit liquor have probably been reinforced by the extension of sugarcane cultivation lower down the valley : they also have an excess of food-grains and can reap all the advantage of the high prices which prevail.

With constriction of grazing grounds and the high price of wool, the poorer classes have to pay much more for their clothing, and for anyone who wants a new house or repairs done, the

CHAP. II. Section C.

Material condition of the people.

wages' bill of the carpenter and mason has become much larger than it was twenty years ago. The best clothes of the peasant are remarkably good and warm and are nearly all of wool. There are few families who confine themselves to clerical work and nearly every body has some land. The literate people are showing more taste in regard to dress, and are more careful about domestic cleanliness. But there has been practically no change in the food of the people, except in the direction of fruit, which is more largely consumed than before. The quantities of jewels worn by all persons at fairs show that reserves of valuables exist in most houses. Generally the Kanets look stronger and better fed than the menial castes, who often have a miserably ill-nourished appearance. The more backward and poor people are in the Upper Parbati valley where they get little sun and are not enterprising enough to make up for lack of crops by doing forest or other work for daily wages. The Sarájís nearly all obtain employment when necessary in the Simla Hill States.

SECTION C.

FORESTS.

Description of the forests.

The forests of Kulu resemble those of the adjacent parts of the Himalaya, and the chief factor influencing the distribution of species is the elevation and aspect in so far as they affect the temperature. At the lower elevations occurs the chil pine, which however extends to over 6,000 feet in the comparatively cold Párbati valley. It is found at its best on quartzite rock, and on this formation in the Párbati and Tirthan valleys and in Pandrabís *kothi* of Outer Saráj it attains very great dimensions, probably with few equals in the Punjab: these trees are, however, of slow growth and reach a great age: they form pure forests of the usual type. It is only recently that they have been exploited. Shisham is found growing to a small size in the lowest levels, also wild olive and mulberry. The two latter are much lopped for fodder.

Above the chil zone, the kail or blue pine and the deodar are found, usually associated, often also as pure forests. The kail ascends higher than the deodar and in the upper Párbati valley is mixed with the spruce and silver fir, to well over 9,000 feet. In the forests of the Upper Beas, deodar does not grow above 7,000 feet and its mean elevation is 6,000 feet. In certain places, however, in Outer Saráj and in the Rolla reserve of Inner Saráj, it is found mixed with silver fir and brown oak at a much greater height. Deodar is there found in two quite different types of forest, mixed with kail at medium elevations on easy ground in the neighbourhood of
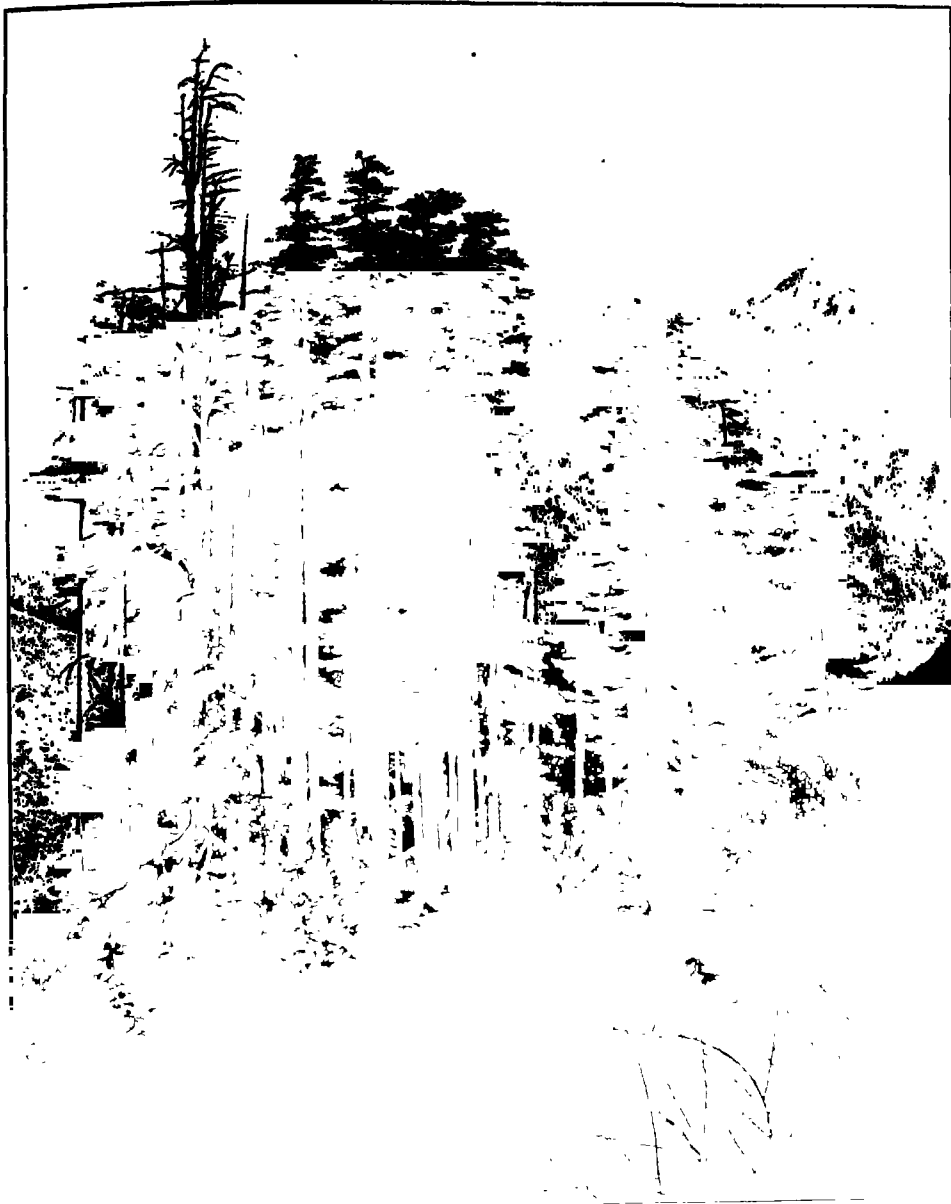
Photo.-engraved & printed at the Offices of the Survey of India, Calcutta 1917

No. 8. Deodars at Pulga, Párbati Valley.

villages, and also on rocky precipices in cold and remote situations, where it occurs with spruce and silver fir and ascends to 9,000 feet. In the latter case the kail is invariably absent. In the lopped kail forests of Outer Saráj deodar is spreading and will in certain places ultimately supplant the pine.

Description of the forests.

Extensive forests of common Himalayan oak are found chiefly in the Hurla Valley of Rúpi, associated with rhododendron arboreum (red) and Pieris ovalifolia. Other species found in this zone are the holly oak, alder, birch, hill tun, elm, with Symplocos Cratægoides, Viburnum, Cornus, Rhamnus, Flæagnus and other shrubs. A special feature of the Beas Valley is afforded by the fine alder woods, growing on every piece of freshly-deposited alluvium or moist landslips. This tree however does not regenerate naturally under its own shade. It is much used for building timber and firewood.

Above the deodar and kail forests, from eight to eleven thousand feet, are forests of spruce and silver fir, generally more or less mixed, which at higher elevations become pure silver fir. These species mostly grow in second class forests, remote from villages. With them are associated the Indian horse-chestnut, maple, walnut, and ash, frequently forming woods of broad-leaved trees in moist ravines. Other trees of less importance are the box, yew, bird-cherry, hazel, horn-beam, with the higher-growing variety of elm.

Towards its upper limit of elevation, the silver fir is associated with the brown oak, or this oak may be found practically pure. At 12,000 feet only birch and the mauve rhododendron occur in any quantity, but with them are willows, mountain ash, wild apple and some species of viburnum. Finally, juniper with rhododendron (lepidotum and anthopogon) are the only woody species, and tree growth is replaced by alpine pasture, ascending to the limit of vegetation and the line of perpetual snow.

Principal trees and shrubs.

The following list contains most of the principal trees and shrubs :—

Natural order and species.	English name.	Vernacular name.
Berberidæ.		
Berberis Lycium (and other species).	Barberry ...	kashambal.
Meliaceæ.		
Cedrela serrata ...	Hill tun ...	darl.
Sapindaceæ.		
Aesculus indica ...	Indian horse-chestnut ..	khanor.
Acer Cæsium ...	Maple ...	mandar.

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Principal trees and shrubs.

Natural order and species.	English name.	Vernacular name.
Anacardiaceæ.		
Rhus Cotinus ...	Venetian sumach ..	tung.
" Wallichii ...	(A poisonous tree) ...	rikhal, arkhal.
Pistacia integerrima ...	Kakar ...	kakar.
Leguminosæ.		
Dalbergia Sissoo	Shisham ...	shib, shishu.
Rosaceæ (besides grafted varieties of fruit trees).		
Prunus Puddum ...	Wild (red) cherry ...	pája.
" Padus ...	Himalayan bird cherry ...	jáman.
" Armeniaca ...	Himalayan apricot ...	shári.
" persica ...	Peach ...	áru. malára.
Pyrus Pashia ...	Wild pear ...	shegal.
" lanata ...	Wild apple ...	pála.
" Aucuparia ...	Mountain ash ..	...
Cotoneaster bacillaris ...	Cotoneaster ...	reunsh.
Prinsepia utilis ...	(A shrub) ...	bhekhal.
Rubus ellipticus ...	Yellow raspberry ...	anchu, achla.
" paniculatus ...	Himalayan raspberry ...	ihisri.
Ericaceæ.		
Pieris ovalifolia ...	...	áran.
Rhododendron campanulatum	Mauve rhododendron ...	shargar, Kashmiri patta.
" arboreum ...	Red rhododendron ...	brás.
Oleaceæ.		
Olea cuspidata ...	Wild olive ...	káhu.
Fraxinus floribunda ...	Ash ...	angu.
Euphorbiaceæ.		
Buxus sempervirens ...	Box ...	shamshád.
Urticaceæ.		
Ulmus villosa ...	Elm.	máran.
" Wallichiana ...	...	
Celtis australis ...	Celtis .	khirk.
Morus serrata ...	Mulberry ...	chun. chimo.
Ficus palmata ...	Wild fig ...	phágra.
" Roxburghii ...	Broad-leaved fig ...	trimul.
Salicinaceæ.		
Populus ciliata ...	Poplar ...	phalsh.
Juglandeæ.		
Juglans regia .	Walnut ...	khor, akhrot.
Cupuliferæ.		
Betula utilis ...	Birch	bhurj.
" alnoides ...		
Alnus nepalensis .	Alder ...	kosh.
" nitida ...		
Quercus incana ...	Common Himalayan oak ...	bán.
" semecarpifolia ...	Brown oak ...	kharshu.
" dilatata ...	Holly oak ...	morhu.
Bambuseæ.		
Arundinaria falcata ...	Hill bamboo ...	nirgál.
Coniferæ.		
Cupressus torulosa ...	Cypress ..	devidiár.
Taxus baccata ...	Yew ...	rakhál.
Pinus excelsa ...	Blue pine ...	kail.
" longifolia ...	Chil ..	chil.
Cedrus Libani, Deodara ...	Deodar ...	kelo.
Picea Morinda ...	Spruce ...	rai.
Abies Pindrow ...	Silver fir ...	tos.

Principal trees and shrubs.

There are many shrubs and plants which afford food, medicines and dyes. In June and July wild strawberries of excellent flavour are plentiful in the alpine pastures: they are fragaria vesca, locally called *bhumbhla* or *bhaimphal*, which mean "earth fruit." Raspberries abound along field borders, as do various kinds of barberry, the damson-coloured berries of which are eaten. The *bhekhal* (Prinsepia utilis) is valued for its oil-seeds, and occurs plentifully in waste ground. Dyes are obtained from a species of the Styraceæ, Symplocos Cratægoides, locally called *lojh*, which yields yellow and red madder from the plant Rubia cordifolia, called "*majith*," which grows in old walls and field terraces. Wild gentian (*karru*) and aconite (*patis*) are extensively exported as medicines.

Injuries to which the forests are liable.

Forest fires are sometimes frequent, and it is usually extremely difficult to decide whether they started by accident or design. Smoking, stubble-burning, cooking of food and carrying of torches account for many of the fires and others are begun by children playing with matches while grazing flocks and cattle. Occasionally, however, deliberate malice is the cause, and when this takes place, the contagion sometimes spreads and a sort of mad fit takes hold of the countryside resulting in a series of fires near to each other but disconnected in origin, which are clearly traceable to criminal intent. Evidence is not often available of the actual perpetrators of these offences. All right-holders in the forest concerned are liable to assist in quenching the flames, but frequently the opportunity is taken of spreading the fire instead of putting it out, in order to obtain a good growth of grass for cattle.

Grazing of cattle and flocks is deleterious to regeneration, if at all heavy, but benefits forests which have gone beyond the primary stages of development.

The beetles *scolytus major* and *minor* have been noticed on deodar and *polygraphus* on kail. The fruit of the walnut is destroyed in large quantities by *alcides porrectirostris*. The alder is infected with a longicorn beetle and the spruce with a gall fly: but with the exception of the walnut pest, it may be said that insects do little damage of any consequence in the forests.

The damage done by fungi is of a much more serious nature. *Trametes pini* has destroyed all the kail forests of Saráj where lopping is practised. It also attacks spruce and chil. The lopping of kail has now been prohibited in all demarcated forests. *Peridermium cedri* is a deodar fungus which has two manifestations: one, the ordinary witch's broom

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Injuries to which the forests are liable.

found on branches, which seems innocuous, and the other that which attacks the leading shoot and seems to be invariably fatal. Outting out seems to be the only way of dealing with this pest.

Snow does much damage in unthinned kail pole crops, but under proper management should do little or no harm.

The Forest Settlement.

The settlement operations of 1865—71 had scarcely been brought to a close when a commencement was made in the demarcation of certain portions of the waste as forests, twenty-seven of which were handed over to the Forest Department for management. The work of demarcation was continued by Mr. Duff, Forest Officer of Kulu, and the total area demarcated before the passing of the Forest Act of 1878 was estimated by Mr. Anderson, Forest Settlement Officer, at about 11,000 acres. This area was administered in accordance with local rules framed on the basis of Mr. Lyall's administration paper, and conferring power on the Negís of *kothís* to grant to agriculturists all kinds of trees except those which were considered more valuable, such as deodar, walnut, box and ash. In 1881 a Forest Settlement, in accordance with the provisions of the Act of 1878, was commenced by Mr. A. Anderson, who completed his work in 1886, and submitted a detailed report on the subject to Government after demarcating a large number of forests of an aggregate area of upwards of 1,200 square miles. He proposed that a certain number of these should be constituted reserves under Chapter II of the Act, and that the remainder should be declared protected forests of different classes under Chapter IV.

The area of different classes of forest is given below, range by range :—

Range.	Reserved Forest.		I Class demarcated.		II Class demarcated.		Undemarcated.
	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Area in acres.
Kulu	11	3,692	46	10,912	66	118,985	
Rúpi	18	19,821	48	35,041	33	429,788	
Inner Saráj ...	9	11,357	52	11,005	46	77,814	
Outer Saráj ...	7	5,009	36	16,037	34	4:,586	
TOTAL ...	45	39,8'9	182	72,995	179	664,173	538,781

Exhaustive records were prepared for each forest indicating the rights which may be exercised within them, and

The Forest Settlement.

by what hamlets, those forests being selected as reserves which would yield the most valuable timber, and were at the same time burdened with fewest rights. Provision was made for assessment of the rights to revenue if necessary. It was subsequently ruled by Government that only the grazing of sheep and goats is liable to separate assessment (see page 108). The enjoyment of all other forest rights is indispensable to the people to enable them to raise their crops and pay the land revenue which has been assessed with reference to the value of the crops. The rights were declared appendant to cultivated land, and the sale or alienation of forest produce (except of the inferior kinds) was prohibited. The remainder of the waste, *i.e.*, the uncultivated and unappropriated land lying outside the demarcation, was also declared to be protected forest, and the nature of the rights which might be exercised over it by land-revenue-payers was defined, though in this case it was not found possible to indicate the hamlets, if any, possessing the monopoly of such rights. One of the main objects of the demarcation was the separation of land that should always remain as forest from land that might ultimately be brought under the plough. Hence the breaking up of waste land in the demarcated forests is absolutely prohibited, but in the outside areas new cultivation is allowed in certain cases. Partly for this reason the property in the soil of the undemarcated waste of *Waziri* Rúpi was declared to belong to the *jágírdár* of that tract in order that he might be entitled to reap the benefit of extension of cultivation in the waste. The demarcated forests of Rúpi, however, have been reserved as Government property, although liberal rights of user have been conceded to the *jágírdár*, who is also entitled to the fees paid by shepherds for grazing their flocks within them.

Mr. Anderson's report was, as remarked above, submitted in June 1886, but for various reasons the case was not taken up by the Government of the Punjab till 1896. In that year Sir Dennis Fitzpatrick visited Kulu, and recorded a note on the Kulu Forest Settlement Report, by which considerable changes in the form of the Record and Rules framed under the Indian Forest Act VII of 1878 were ordered to be made. The laborious and difficult task of revising the record and recasting the rules under the Act fell to Mr. Alexander Anderson, C.I.E., who had in the meanwhile assumed charge of the Kángra District. The settlement came into force in 1896.

Legislation since settlement.

The existing law on the subject of forest rights and liabilities has been very clearly arranged in the Forest Manual, Volume I, and there is no need to reproduce it here. Since the

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Legislation since settlement.

notifications of 1896 were issued constituting the forest into the four classes already mentioned, and prescribing rules for the exercise of rights, the question of the right of private persons to cut down the forest trees growing on their own lands has been raised more than once. Finally, by Punjab Government notification No. 294, dated 10th May 1909, certain reserved trees may be cut for domestic needs on land recorded at the last settlement as cultivated, without any restriction, and on land recorded as uncultivated at last settlement, on fixed conditions : reserved trees on private *banjar* (uncultivated land) may not however be cut for sale without permission, and a strict enquiry on the part of the Divisional Forest Officer is prescribed. When reserved trees are sold, the owner loses his rights to obtain trees from Government forests at *zamíndári* rates, unless an exceptional case can be made out, and may also lose that right by reckless felling of his own reserved trees. The object of these rules is to prevent felling of trees outside the owner's boundaries (which generally need demarcation on *banjar* land) and also the denudation of the countryside (such as occurred in Kángra proper), whereby an excessive burden of claims to timber would be thrown on Government forests. In addition, the lopping of kail has been prohibited in demarcated forests altogether, in order to protect the trees from the ravages of fungus *trametes pini*, described above.

Management of the forests.

The departmental management is in the hands of the Divisional Forest Officer, whose head-quarters are at Naggar. Subordinate to him are four Rangers, in charge of the Kulu, Rúpi, Inner and Outer Saráj ranges with offices at Kulu, Bhuin, Banjár and Chowai respectively : they have under them Foresters and Forest Guards. One Forester is in charge of the Beas River in Mandi State. The Department supplies timber to right-holders and to other Government Departments in addition to protecting, exploiting and regenerating the forests as a whole. Besides much small timber, the following first class trees are sold annually, taking an average of seventeen years, at very low rates to right-holders :—

Deodar.	*Kail.*	*Chil.*	*Fir.*
103	804	38	1,659

In addition, inferior trees reserved or not reserved are given to right-holders free of charge. Grants to right-holders are given annually by the Assistant Commissioner and by the Divisional Forest Officer. Free grants have hitherto been made for public works as follows, taking the same average, annually :—

Deodar.	*Kail.*	*Chil.*	*Fir.*
63	68	4	16

The *Kothi* Funds are in charge of the Divisional Forest Officer, and are made up of land revenue assessed on *nautor*, or waste broken up by the permission of the Assistant Commis-

sioner, executive fines inflicted for failure to render *begár*, and the value of trees, other than deodar, sold to right-holders; except in the Upper Beas Valley, the value of such trees is refunded if they are sawn up instead of being axed. The Assistant Commissioner sanctions grants out of these funds for local purposes, such as roads and bridges (other than those managed by the District Board and Government Departments), *pálághars* (*sardís* for *zamíndárs* at stages where they have to come to render *begár*), and drinking fountains (*baoli*). The giving out of *nautor*, or permission to cultivate undemarcated forest lands, is in the hands of the Assistant Commissioner. The area available for fresh cultivation has so much diminished that arrangements are now being made for registering the exact localities where, by general consent, it can be given without prejudice to the rights of local landowners.

Management of the forests.

The working plan of 1898.

The working plan of 1898 was the first attempt to manage the Kulu forests on systematic lines and was prepared at a time when the only species of any value for export was the deodar. In consequence, the plan mainly concerned itself with that species: other forest trees were treated as inferior and their felling was only considered with reference to the demands of the right-holders. The creation of pure deodar forests in place of those containing deodar mixed with other species was contemplated, the "inferior" kinds to be left to grow in forests by themselves. The amount of large deodar that could be extracted was calculated for each range, and the total annual yield for export was fixed at 1,800 first class trees of 24" diameter, with an allowance of 300 for local consumption: these prescribed fellings have been carried out.

The results of this system, based on selection, have not been satisfactory and reproduction has not occurred to the extent required for the future continuance of the forests. Where improvement fellings and thinnings have taken place, and where felling *débris* has been cleared away, the ground prepared for seed and the seedlings properly tended, good results have been obtained: but the difficulty still remains that under the present working plan the whole area of the division is nominally under regeneration at the same time, and it is impossible to devote the attention necessary to all areas which require it. The plan has served its time and to a great extent fulfilled its object; and it created order out of chaos. But with the progress of knowledge of forestry, a fresh plan has been worked out which is based on entirely new methods and is expected to conserve the forests as forests and at the same time bring in very much larger returns.

The new working plan.

The forests will be regenerated by compartments, taken in rotation: these have been mapped out and the rotational period provisionally fixed at thirty years for each compartment: during

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The new working plan.

this period the compartment will remain closed to all rights and regenerated. The system is known as the regular and shelter-wood compartment system. The usual process will consist of fellings whereby the whole crop will be cleared except for trees left at certain intervals for seed. The ground will at the same time be prepared for the reception of the seed, and after the young crop has started it will be properly tended. The canopy of the mother trees will be so manipulated that regeneration is obtained and sufficient light given to the new crop while an undue growth of weeds is prevented. The compartments which are to fall into Periodic Block I have been settled, and the idea at present is that there will be four such blocks in each forest, providing for a rotation at 30 years each, of 120 years; for fir it is expected that there will be 5 blocks with a rotation of 150 years at 30 years each. But data regarding the ages of trees and the outturn of various sizes and species are still being collected and the working plan will be revised after 15 years when the compartments for Periodic Block II will be finally settled: the new plan will assume that 10 years of the first period have already passed, so that the duration of the first closures will only be for 20 years.

The essence of the sylviculture of the new plan is to grow each species of tree in the locality most suitable for it. While making every effort to increase the proportion of deodar in the mixed forests on all localities suitable to this species, no endeavour will be made to grow exclusively deodar in forests now occupied by other trees. The mixed character of the crops will be maintained, and, taking nature as a guide, the whole area placed in Periodic Block I will be regenerated with that species which is most suitable to the different factors of locality found in every compartment. In places not suitable for growth of coniferous trees, walnut and ash will be substituted for the rubbish now cumbering the ground and the resultant crop may be one in which all species are represented, each in that portion of the forest most suited to its individual requirements, all together growing up to form an even-aged fully stocked wood, putting on the maximum increment, and when mature yielding a revenue per acre far in excess of anything contemplated in the past. Another entirely new feature of the new working plan is the proposal to exploit the fir forests. These are of enormous extent and occur in 2nd class forests at high elevations; hitherto, grazing in them has been unrestricted and there has been no commercial exploitation, fellings having only been allowed in satisfaction of claims of right-holders. Fir beams (of 15 feet length) are now for the first time being exported, and it is more than probable that fir sleepers will soon be used on railways. A fir working circle has been established and closures will be made for the compart-

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The new working plan.

ments of Periodic Block I. It has been found that many fir forests have been very much overfelled by right-holders and there has been little or no regeneration. Knowledge of the sylvicultural requirements of the Indian spruce and silver fir is at present very limited and the possibility of exploiting these species which now for the first time presents itself will be utilised to try various methods of regeneration.

Financial results.

The surplus obtained from the Kúlu forests has been much larger than the yearly profit of Rs. 24,300 estimated in the old working plan. In the last five years the net revenue obtained has increased from half a lakh to a lakh and one-third, in spite of a progressive expenditure on works of all sorts. Departmental exploitation was abandoned in 1908-09 in favour of the sale of trees standing.

The revenue obtained from grazing fees has been described in Chapter II, Section A, in the paragraphs devoted to sheep and goats (p. 109).

Export.

All timber is exported in scantling, as the Beas is not a suitable river for floating logs. Timber from Outer Saráj is also floated in sleeper form down the Sutlej. The sale depôts are at Doráha for the Sutlej and Wazír Bhullar for the Beas. There is a collecting depôt at Dehra Gopípur on the Beas.

Labour supply.

For forest exploitation Kulu labour is most unsatisfactory and has largely been supplanted by labour from Mandi and other tracts. There are several reasons for this. The Kulu man has no very keen commercial instinct, as is possessed for instance by the Láhula. He is fond of village social life and finds that he can live comfortably enough without an excessive amount of work. He has been spoilt also by the competition of contractors who offer advances against each other and he has also been disgusted with the dishonesty of sub-contractors who have frequently decamped with his wages. But there can be no doubt that on the whole the Kulu man has himself very imperfect ideas of honesty, and Kulu contractors and labourers have systematically cheated each other. The result is that much money goes out of the country which ought to stay there.

List of Forest Officers.

LIST OF FOREST OFFICERS WHO HAVE HELD CHARGE OF THE KULU FORESTS.

From October 1874 to 1880.

Mr. G. Duff	...	Deputy Conservator of Forests, in charge Beas Division.
Lieutenant-Colonel W. Stenhouse.		Ditto.
Mr. J. S. Mackay	...	Assistant Conservator, in charge Kulu Sub-Division.

NOTE.—Up to 31st March 1878, the Kulu forests were under the charge of the Beas Divisional Officer and from 1st April 1878 a separate division with the name of Kulu Sub-Division was formed.

CHAP. II.
Section D.

List of Forest Officers.

From 1881 to 1917.

Serial No.	Name.	Rank.	From	To
1	Mr. L. Gisborne Smith ...	Assistant Conservator of Forests.	1-5-81	23-7-82
2	Lala Moti Rám ...	Forest Ranger ...	24-7-82	16-10-82
3	Mr. L. Gisborne Smith ...	Assistant Conservator of Forests.	17-10-82	28-4-85
4	Mr. F. O. Lemarchand ...	Deputy Conservator of Forests	29-4-85	April 1886.
5	Mr. E. A. Down ...	Ditto ditto	April 1886	11-12-87
6	Mr. F. O. Lemarchand ...	Ditto ditto	12-12-87	4-3-88
7	Mr. E. S Carr ...	Ditto ditto	5-3-88	19-5-88
8	Mr. F. O. Lemarchand ...	Ditto ditto	20-5-88	9 12-88
9	Mr. L. Gisborne Smith ...	Ditto ditto	10-12-88	13-4-89
10	Mr. J. L. Pigot ...	Assistant Conservator of Forests.	14-4-89	October 1890.
11	Mr. A. V. Monro ...	Ditto ditto	October 1890.	5-4-91
12	Mr. J. L. Pigot ...	Deputy Conservator of Forests	6-4-91	May 1891
13	Mr. F. O. Lemarchand ...	Ditto ditto	May 1891	8-7-91
14	Mr. C. P. Fisher ...	Ditto ditto	9-7-91	7-1-94
15	Mr. A. M. Reuther ...	Ditto ditto	8-1-94	15-3-94
16	Mr. E. M. Coventry ...	Assistant Conservator of Forests.	16-3-94	11-4-94
17	Mr. C. F. Fisher ...	Deputy Conservator of Forests	12-4-94	19-3-97
18	Mr A. L McIntire ...	Ditto ditto	20-3-97	27-7-99
19	Mr. G. S. Hart ...	Ditto ditto	28-7-99	25-10-99
20	Mr. A. L. McIntire ...	Ditto ditto	26-10-99	6-4-01
21	Mr. A D. Blaschek ...	Assistant Conservator of Forests.	7-4-01	14-8-01
22	Mr. A. L. McIntire ...	Deputy Conservator of Forests	15-8-01	16-3-02
23	Mr. E. M. Coventry ...	Ditto ditto	17-3-02	31-3-03
24	Mr. J. C. Carroll ...	Ditto ditto	1-4-03	21 10-03
25	Mr. E. M. Coventry ...	Ditto ditto	22-10-03	26-10-03
26	Mr. A. J. Gibson ...	Ditto ditto	27-10-03	11-1-04
27	Mr. J. C. Carroll ...	Ditto ditto	12-1-04	2-9-05
28	Mr. B. O. Coventry ...	Ditto ditto	3-9-05	19-4-06
29	Mr. C. G. Trevor ...	Assistant Conservator of Forests.	20-4-06	6-1-08
30	Mr. R. Parnell ...	Ditto ditto	7-1-08	9-8-10
31	Mr. H. M. Glover ...	Ditto ditto	10-8-10	23-12-11
32	Mr. C. G. Trevor ...	Deputy Conservator of Forests	24-12-11	8-11-16
33	M. Muhammad Afzal ...	Extra Assistant Conservator of Forests.	8-11-16	1917

SECTION D.

MINES AND MINERAL RESOURCES.

Mines.

The mineral wealth of Kulu is believed to be potentially very great, but the isolation of the country, the steep slopes of the hills, and the difficulty of procuring an adequate amount of labour have proved insuperable obstacles to its development. In Rúpi veins of silver, copper, and lead have been discovered.

Mines.

Various lodes have been found in the valley of the Upper Beas. Iron occurs in places, especially in *Kothi* Náráingarh in Outer Saráj, but is not worked, as the import from Mandi is sufficient. Slate of a rough quality is obtainable throughout Kulu and Saráj, and is largely used for roofing. There are no mines now worked in the tract.

Hot springs.

There are hot springs at Bashisht on the left bank of the Beas above Manáli, at Kaláth on the right bank of the same river above Katrain, and at Maníkaran and Kirganga on the right bank of the Parbati. Space does not allow of reprinting the very full account of these waters given in the old Gazetteer. The Bashisht and Kaláth springs are situated on landslips, with the result that the hot stream which issues from a deep source is contaminated by surface drainage : iron is absent and sulphur only present in the form of sulphates, while the general hardness of the water is due to lime : no particular advantage is likely to result from bathing in it, while harm would probably accrue from drinking it. The temperature of the water reaches 132·8° Fahr. in the summer. That of the Maníkaran springs ranges from 185° to 201·2° Fahr., the latter being the boiling point for Maníkaran. The water issues from granite and deposits carbonate of lime and carbonate of iron which in places lie as much as 15 inches in thickness. The highest-lying spring, behind the temple of Rám Chandar Ji, used to throw up a jet of water four to five feet high, but the earthquake of 1905 has reduced this head to one foot. The water does not show a trace of impurities of vegetable origin, or arsenic or sulphur, and no appreciable quantity of iron is present. It would be good drinking water but for the lime, and the iron is evidently deposited when the water cools. It has practically no medicinal qualities. The Kirganga water has not yet been analysed.

SECTION E.

ARTS AND INDUSTRIES.

Ironsmiths.

A good deal of iron work is called for in connection with agriculture and is performed by Lohárs. The work turned out is of a poor quality: there is no knowledge of casting or of steel-tempering: hammered iron articles only are made, of a rough sort. There is no such thing as an iron harrow, or an iron ploughshare : the ploughshare is of wood, very much tapered, with an iron point; it does not cast the earth aside, and is inferior to those of Spiti and Láhul. The digging tools consist only of light chopping spades and picks. For heavy tools and

saws there is a great demand, but these are all bought from the Sultánpur shops. There is only one shoeing-smith at Sultánpur.

Work in the precious metals.

Some Lohárs work also in the precious metals, and these are all local men. Suniárs and Tatiárs also work in gold and silver; some of them come from Kángra, but the majority belong to Kulu. Dughi Lag village contains several houses of Suniárs. Their work is often very well done, and they turn out attractive jewellery with some good enamel work. A pair of silver bracelets (*karrc*) costs from Rs. 20 to 40, and the charge per *tola* is 2 annas, the work being plain: for more intricate work the charge is 4 annas. That for gold is not fixed. Gold work is paid for by weight after being made up, as the gold is supplied by the worker, and soldering is counted in with the gold, so that profits are high.

Copper and brass work.

Tatiárs live mainly at Larán Kelo near Naggar and at Kaniárgi in *Kothi* Bhalán. Their work is plain and they turn out water pots, household dishes and *lotahs* of brass and copper.

Carpenters and masons.

The Tháwi is essentially a house-builder and does carpentry as well as masonry. Now-a-days, owing to the larger supplies of timber, there has been a distinct falling-off in stone work. The house is contracted for according to size, and the doors are separately counted. The wages always include three meals a day, two of them being of better quality than the *zamíndár* can indulge in: at the end of the work a full suit of woollen clothes, consisting of five garments is given to the Tháwi. These men put in some quite good work in carvings for temples, and often remain at the work continuously till it is finished, not even going home. The planes and chisels are good, but brace and bits inferior, and there are no carpenter's benches. Carpenters from the plains are called Tarkhán, as usual. The Brehi is a man who fells trees in the forests and makes rough beds and boxes. But almost all *zamíndárs* have a knowledge of wood-work and can build walls of undressed stones.

Leather-workers.

Chamárs live mainly at Naggar and at Báshing near Sultánpur and are indigenous to the country: they worship Deota Guga, whose shrines have some good stone carving. Tanning is not well done and inferior thread is used for sewing the leather. The leaves and twigs of the *tung* plant (Rhus Cotinus) are crushed and stamped into the raw hide with the feet. The bark of the *bán* oak (Quercus incana) is also employed to deepen the colour. These operations only take a few days, and the leather is not thoroughly tanned. Mustard oil (*shai*), which is injurious to leather, is used for the softening process.

Factories.

There are no factories in Kulu.

SECTION F.

TRADE.

External trade.

Trade with Ladák and Western Tibet was formerly recorded at Akhára, Kulu, but changes in the system of registration occurred, and first the Ladák trade was omitted owing to the fact that it all came from Kashmír and belonged to the internal trade of the Punjab, and then (in 1916) the post was removed to Kyélang. The reason for this was that at Akhára it is difficult to register correctly the origin of imports and the destination of exports, while much trade escaped registration owing to imports being purchased in Láhul and the Upper Kulu Valley. Trade is chiefly in the hands of merchants who have shops at Hoshiárpur, Amritsar, Kulu and Leh and branches in Yárkand, but is also carried by Láhulas and by gipsy tribes of Khámpas, Báltís, Chambiáls and others who go to and fro between Amritsar, Kulu, Mandi, the Simla States and the countries beyond the Mid-Himalayan Range. The Ladák trade in 1913-14 was valued at over 2¼ lakhs of imports and over 1¼ lakh exports. Of the imports over 2 lakhs consisted of *charas*. The balance is still more adverse in the case of the trade with Western Tibet, which alone is recorded now. The imports in 1916-17 were valued at Rs. 3,05,438 and the exports at Rs. 1,06,931, including Rs. 87,662 of silver coin. only. From Tibet came raw wool and *pashm* worth Rs. 2,83,455 and by-products of that trade in the shape of sheep and goats valued at Rs. 16,569 and of Rs. 5,414 worth of salt. The returns for the current year from the Kyélang post show a great advance in the figures for wool. This commodity has gone up in price and quantity since the war started, owing to the largely increased demand for Government purposes. It is paid for mostly in cash by Láhulas who go into Tibet in July, taking rupees with them. They cannot take goods owing to the enormous duties on imports from British India levied by the Tibetan authorities, who have also begun to tax exports, differentiating heavily in favour of trade with Native States. The Láhulas export the wool from Tibet on their own sheep which return to Tibet for the winter grazing. What they do not import is brought by wandering tribes of Khámpás and others who exchange it at Patseo fair for Indian exports. Thence, it is taken by Láhulas and others to Kulu where it is either bought by Sultánpur merchants and agents from the Dháriwál mills, Amritsar, and Ajmer, and sent down-country *viâ* Hoshiárpur on mules, or is sold to Kulu people in the Upper Beas Valley. Some is absorbed in Láhul and made into woollen clothes. The Kulu people also make quantities of *puttoos*

CHAP II. Section G.

(blankets) which they wear or export later in the year down-country.

External trade.

Exports from Kulu to Tibet chiefly consist of Indian and European cotton piece-goods (Rs. 3,000), tea (Rs 6,500), grain (Rs. 5,700) and metals: other items include nuts, jewellery, leather, oils, spices, sugar, tobacco, etc. There has been a larger increase recently in the amount and value of Indian cotton piece-goods, tea and metals. Exports pass the post from April to October and imports from July to November only.

Internal trade.

In October 1916 a temporary trade post was opened at Bajaura to register the traffic over the Dulchi Pass. The resulting figures for the first half-year are most interesting. Rs. 1,61,213 worth of goods came in from down-country, of which half a lakh consisted of piece-goods, the bulk being Indian, Rs. 20,000 of oil, Rs. 12,000 of salt, Rs. 22,000 of sugar, and Rs. 7,500 of tea.

Over 3 lakhs value went down, of which over a lakh consisted of wool and *pashm*, three-quarters of a lakh of gentian and other medicinal roots, half a lakh of opium, nearly a quarter of a lakh of *charas*, hides Rs. 11,000, spices Rs. 9,000 and grain Rs. 8,000.

A certain amount of internal trade is done at the Dasehra fair at Sultánpur in October. But it does not amount to more than half a lakh in all, the bulk of it being in woollen articles from Ladák and Yárkand and from Rúpi and Ujji in Kúlu.

The Patseo fair will be noticed in the part of this volume devoted to Láhul.

SECTION G.

COMMUNICATIONS.

Roads.

Some idea of the principal routes to Kulu has already been given in Chapter I. There are no railways or canals and there is no wheeled traffic. The stages on the main roads are given below: the nearest railheads are at Simla 122 miles and at Patháncot 143 miles, respectively, from Sultánpur. A tonga service is maintained from Pathankot to Pálampur and also a service of motor-lorries for conveyance of fruit and a few passenger motors. Ekkas run as far as Mandi. For a compendium of information regarding travelling in Kulu reference should be made to the booklet which may be obtained from the office of the Assistant Commissioner, Kulu.

Roads.

The road system consists of the main Simla-Ladák trade route, and the smaller roads which join it from the west, with branch roads up the smaller valleys and through forest. The Simla road is kept up by the Public Works Department under the Assistant Engineer, Kulu, and is a broad well-graded mule road leading through Nárkanda and Kumhársen State. This section down to the Luhri Bridge over the Sutlej is under the Executive Engineer, Simla. From Luhri the road enters Saráj tahsil and goes up the Ani Gád by Ani and Khanág to the Jalori Pass, which is closed by snow in winter, down the Jibhi Gád by Banjár to the Tirthan River, which it follows to Lárji, and up the west bank of the Beas by Bajaura, Kulu and Katrain to Manáli. As far as Manáli rickshaws can be taken with a moderate degree of comfort and the road then crosses to the east bank and becomes steeper, up to the Rotang Pass, by Kothi and Rahla. Thence it crosses Láhul by the Chandra and Bhága Valleys and the Báralácha Pass to Lingti whence it is taken by the Kashmír State authorities to Leh. There are rest-houses throughout the length of 162 miles from Luhri to Patseo on the south side of the Báralácha Pass. The branch roads which feed this main artery from the Mandi side are also maintained by the Public Works Department as far as Sil Badwani in Mandi State and the Dulchi Pass (20 and 9 miles respectively), as well as the track on the east bank of the Beas from the bridge above Akhára to Manáli, and the connecting piece of 2 miles length from Katrain to Naggar. The Department also maintain the large suspension bridge spanning the Beas at Bhuin, and connecting with the Párbati Valley: their charge covers 260 miles.

The main improvements in this route since the Gazetteer was last compiled is the realignment over the Jalori Range. Instead of running up the spur through Dalásh, Chawai and Kot over to Jibhi, the road goes up the Ani Gád and crosses the ridge at 10,000 feet, saving 650 feet of ascent, and is much better graded. There are new rest-houses at Ani, Khanág and Shoja; Kot and Jibhi bungalows have been demolished and Manglor retained only as a convenience for officials, with no stage arrangements there. There are also new rest-houses at Kulu (Calvert Lodge) in addition to the dâk bungalow there, at Naggar (the Castle) and at Kothi, near the Rotang Pass.

The other roads in Kulu and Saráj are managed partly by the District Board and partly by the Forest Department. The former body maintains 182 miles, and the latter 125 miles of bridle paths with about the same distance of inspection paths. The District Board keep up a connection between Kaláth and Harípur across the Beas north of Katrain, the Párbati Valley

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Section G.

Roads.

road as far as Maníkaran (20 miles) and a road from Bhuin down the east bank of the Beas and up the Urla nallah and over the hills to Banjár *viâ* Garsa and Sainja. Forty-three miles lie in Kulu tahsil and 138 in Saráj. The Maníkaran road has been much improved by expensive realignments and the Bhuin-Garsa road is now well graded. The former has forest rest-houses at Bhuin, Jari and Pulga and a civil rest-house at Maníkaran, the length beyond Maníkaran being under the Forest Department; a transfer of this road to the Forest Department is contemplated. There is a forest rest-house at Garsa and others at Bhalán and Sainja and a civil rest-house at Panihár: this road beyond Garsa is steep and rocky and unsuitable for mule traffic. The length of 8 miles from Sainja to Lárji is now being reopened after being wrecked in the earthquake of 1905. From Banjár a good road runs to Bathád Civil Rest-house passing Bandal Forest Bungalow where the Forest roads from Jibhi and Nohanda meet. Beyond Bathád the track rises steeply to the Bashleo Pass and descends to Saráhan Civil Rest-house and then crosses the Kurpan River to Chunagáhi where there is a similar bungalow. From Chunagáhi the old road went down by a steep descent to the east to Zakátkhána and a new well-graded road now runs on the west of the spur to Nirmand and round the hill to Rámpur bridge, connecting with Zakátkhána and 2 miles of bridle-path in Pandrabís Kothi. From Nirmand a good mule-track descends to the Kurpan and passes by Kuil and Nithar to Dalásh, where it meets the old Luhri-Kot road: another branch unites Dalásh with Ani.

The Forest Department maintain connection between Outer and Inner Saráj by a road from Banjár up the western spur to the Jalori Range and down to Takrási and Pan-o bungalows, the latter being joined to the Ani road. A new route is to be built by the department from Saráhan to Chawai with rest-houses. In Inner Saráj, Jibhi is connected with the Banjár-Takrási road and with Bandal and the Tirthan Valley in Nohanda *Kothi*. In Kulu tahsil the existing forest roads are from Nágni to Bhuntar, from Kulu to Kais Dhár and the Máhul Khad, from Naggar southwards to Borsu and over the ridge to Jari on the Párbati, from Maníkaran to Pulga, and in forests west of Manáli. The Department contemplate extensive new roads in the Hurla Gad, and the Sujoin nallah, and elsewhere in the Upper Beás Valley. The subdivision has recovered from the disastrous effects of the earthquake and communications have been already very much improved.

Bridges.

The *jhúla* over the Sutlej at Rámpur has been replaced by the Bashahr State authorities by a fine suspension bridge, and
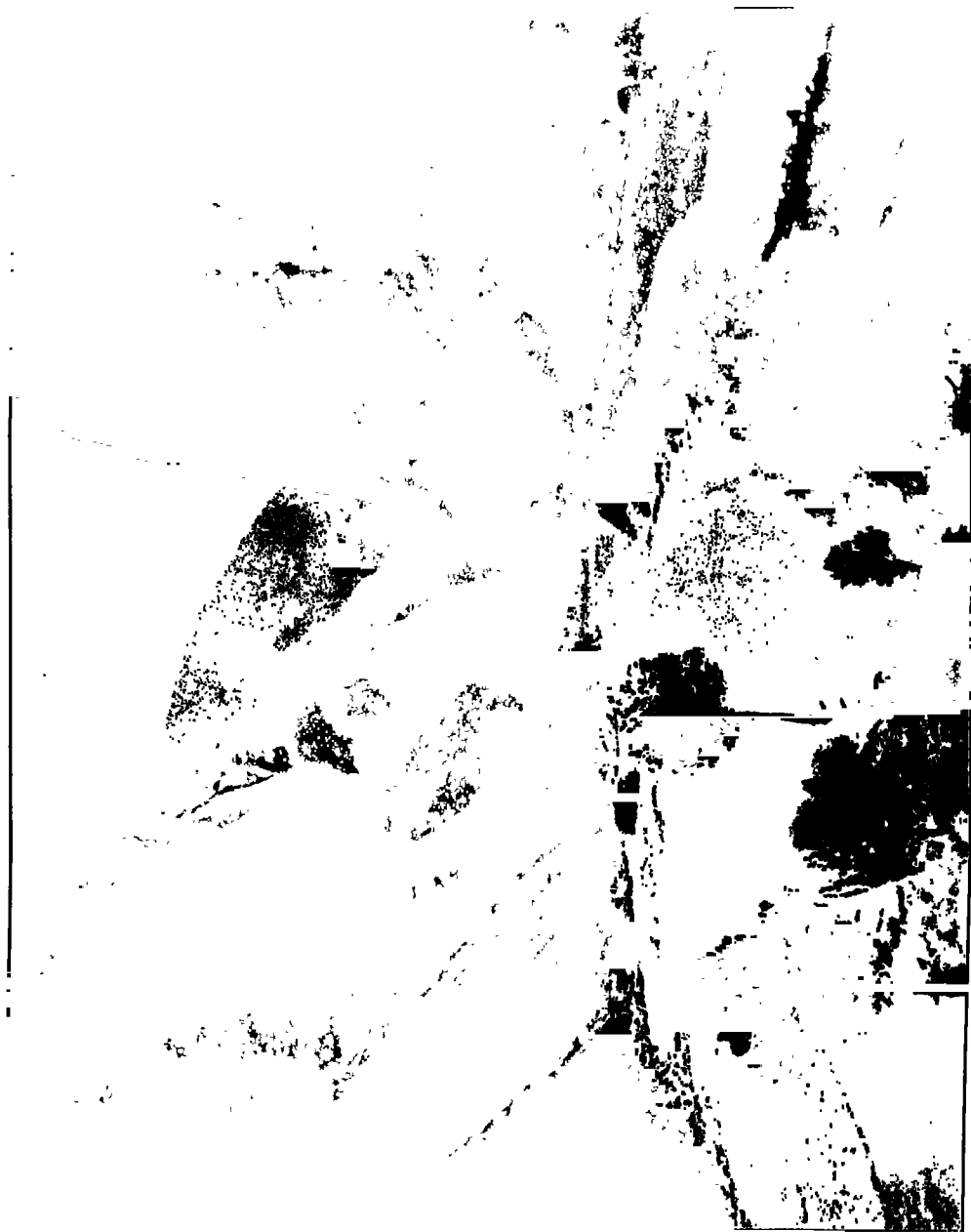
Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917

No. 9. The Beás at Lárji

Bridges.

there is another at Luhri in place of the old cantilever. The only other suspension bridges are at Lárji over the Sainj, at Utbeháli over the Beas, at Pulga over the Párbati and the Bhuin bridge already mentioned. Elsewhere the bridges are of wood on the cantilever principle. These consist of whole trunks of pine or cedar built in successive tiers (these beams are called *néju*), each tier projecting beyond the one below it, into embankments of timber-bonded stone on either side of the river. The tiers slant upwards and each supports at its extremity a cross beam which props the succeeding tier. The roadway is formed by long beams (*paj*) laid across between the extremities of the highest tier on either side, and covered with planks. The beams of the top tiers on either side are called *kaneja*.

Footpaths.

In addition to the roads maintained for the benefit of traders and travellers there are innumerable footpaths leading from village to village and from glen to glen. The construction of many of these must have called forth considerable engineering ingenuity and nerve. Few villages are so inaccessible that the small hardy hill cattle cannot be driven to them from the next village or pasture ground along a rough-looking but carefully-constructed path, sometimes hewn out of the solid rock along the face of a cliff. Narrower tracks are sufficient for the passage of sheep and goats, but the more rocky nature of the ground resorted to by the flocks often necessitates the building of rude gallery paths consisting of slabs resting on wooden props driven into clefts in the precipice, and where clefts are wanting a notched pole serves on occasion as a staircase from one gallery to another. For the passage of a man alone unencumbered by a load or by the care of animals the mere semblance of a path is sufficient, something to grasp with the hand or, monkey-like, with the feet, and the "*kháli ádmi ká rásta*" is the Kulu man's term for the worst kind of track he knows. Many of these paths have been put into repair by the willing labour of the villagers assisted by small grants from the *Kothi* funds for blasting purposes, and good bridle-paths have now largely taken the place of the old rough staircases.

The Lárji-Mandi road.

The biggest project for improving communication with Kulu is the scheme for a cart-road 25 miles long from Lárji to Mandi *viâ* the Beâs gorge. Government has already spent large sums on building part of this road, and it is hoped to complete the entire section within a few years. The resulting benefit to the Kulu fruit and wool trade is expected to be very great, and the road will also bring the much-needed advantages of closer intercourse with the Punjab and the outside world.

Passes into Bangáhal.

The passes over the Mid-Himalaya and the Jalori Ridge are mentioned in the list of regular routes below. There are also

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Passes into Bangáhal.

several ways into Bangáhal which are not used except by shepherds and *zamíndárs* in search of wool. The northernmost, from the Solang nallah into Bara Bangáhal, is very seldom used and the altitude of the highest point in it must be over 18,000 feet. The next, going southwards, is the Dorhni route into Bara Bangáhal: the Dorhan ridge (as the range is here called) is crossed at several points between the Manálsu Khad and the Phojal. It takes 7 days from Manáli to the first village in Bara Bangáhal for laden coolies and 4 days for an unladen man. The Dorhni route is considered very difficult and is said to be traversible only in the rains, owing to the snow lying very long on the ridge.

The other pass into Bara Bangáhal is the Káli Hain or "black ice" pass leading from the village of Káthi near the head of the Phojal nallah: it is 15,500 feet high, and difficult. From Kukri village further south another path ascends to the Goralotnu Pass, 14,500 feet high, to the pasture of that name in Chota Bangáhal and lower down to Puling Village in *Kothi* Swár.

The Sári Pass is the fifth on this ridge and is 12,260 feet high. It is an easy route, leading from Samálaug village in Pháti Pichhli, *Kothi* Mángarh, up a long snow bed to grassy slopes and down the other side to Milang and Swár in Chota Bangáhal. It is open from about May 15th. The Bhubhu and Dulchi Passes on this range of hills are described above and also in the table of routes.

ROUTES IN KULU.

A.—ORDINARILY PASSABLE BY MULES.

I.—From Pálampur the summer route is:—

			Miles.	
1.	BAIJNÁTH	...	11	Dák Bungalow, Post Office.
2.	DHELU	...	13	Mandi Dák Bungalow. Notice to be given to Assistant Superintendent, Mandi State, of supplies required.
3.	JHATINGRI	...	13	Mandi Dák Bungalow. Post Office at Guma.
4.	BHADWÁNI	...	11	Ditto.
5.	KARAON	...	12	Kulu Civil Rest-house, 6,400 feet. Cross Bhubhu Pass, 9,480 feet. Coolies 8 annas. Mules Re. 1.
6.	SULTÁNPUR	...	8	4,000 feet. Dák Bungalow, Rest-house, Tahsil, Post and Telegraph Office, Hospitals, Town.

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Routes in Kulu.

	Miles.	
In winter the route is :—		
3a. URLA ...	14	Mandi Dâk Bungalow.
4a. DRANG ...	13	Ditto, Post Office.
5a. KATAULA ...	14	Ditto.
6a. BAJAURA ...	16	Kulu Dâk Bungalow, 3,600 feet. Post and Telegraph Office. Cross Dulchi (Kandhi) Pass, 6,760 feet. Coolies 8 annas. Mules Re. 1.
7a. SULTÁNPUR ...	9	As above No. 6.

II.—From Simla.

	Miles.			
1. PHÁGU ...	12	Dâk Bungalow.		Simla Hill States.
2. THEOG ...	5½	Ditto.		
3. MATHIÁNA ...	11	Ditto.		
4. NÁRKANDA ...	11	Ditto,	9,000 feet.	
5. LUHRI ...	12½	Rest-house,	2,600 feet.	
6. ANI ...	11½	Kulu Civil Rest-house, 4,100 feet.		
7. KHANAG ...	9	Ditto	8,300 feet.	
8. SHOJA ...	7	Ditto	8,800 feet. Cross Jalori Pass, 10,000 feet.	
9. BANJAR ...	10	Ditto	5,000 feet. Tahsil, Post Office, Hospital, Police Rest-house.	
10. LARJI ...	12	Ditto	3,160 feet.	
11. BAJAURA ...	11½	As in Route I.		
12. SULTÁNPUR ...	9	Ditto.		

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Routes in Kulu.

III.—From Rámpur Bashahr.

		Miles.	
1.	CHUNAGAHI ...	9½	Kulu Civil Rest-house. Rise from 3,300 feet to 8,000 feet.
2.	SARAHAN ...	11	Kulu Civil Rest-house, 8,000 feet. Across Kurpan Valley.
3.	BATHAD ...	11	Kulu Civil Rest-house, 6,000 feet. Cross Bashleo Pass, 10,750 feet. Coolies 6 annas. Mules Re. 1.
4.	BANJAR ...	12	As in Route II. Bandal Forest Bungalow is midway on this march.

IV.—Párbati Valley.

		Miles.	
1.	BHUIN ...	7	From Sultánpur. Coolies 3 annas.
		3	From Bajaura. Coolies 2 annas.
			Forest Bungalow, 3,700 feet.
2.	JARI ...	13½	Ditto 5,000 feet. Coolies 6 annas, half of which is paid at Channi where the coolies are changed.
3.	MANÍKARAN ...	8	Civil Rest-house, 5,700 feet. Coolies 3 annas.
4.	PULGA ...	9	Forest Bungalow, 7,000 feet.

Route to Lahul.

V.—Kulu to Láhul.

		Miles.	
1.	Sultánpur to—		
	(a) KATRAIN... or	11½	4,800 feet. Civil Rest-house.
	(b) NAGGAR ...	14	5,800 feet. Civil Rest-house. Coolies 5 annas. Post Office and Telegraph Office.
2.	MANÁLI ...	12	6,200 feet Civil Rest-house, Post Office is called Duff Dunbar.
3.	KOTHI ...	6½	8,500 feet. Civil Rest-house. At Rahla there is a P. W. D. Rest-house under the Assistant Engineer, Kulu.

Route in Láhul.

4.	Khoksar ...	13	Civil Rest-house. Cross Rotang Pass, 13,000 feet. Coolies 8 annas. Mules Re. 1.
5.	Sissu ...	9	Civil Rest-house.
6.	Gondhla ...	7½	P. W. D. Rest-house. Assistant Engineer is asked for permission to occupy.
7.	KYELANG ...	10½	Civil Rest-house. Post Office. Moravian Mission.
8.	Jispa ...	13	P. W. D Rest-house. After Jispa the Inner Line is met at Dárcha and the Deputy Commissioner, Dharmsála, must be asked for permission to cross it, except by officers on duty.
9.	Patseo ...	10½	P. W. D. Rest-house.
10.	Zingzingbár ...	6	Sarái. *Ata*, wood and grass available, 14,000 feet.
11.	Kyinlung ...	13	Sarái. Cross Báralácha Pass, 16,017 feet. Coolies 6 annas.
12.	Lingti ...	17	No sarái or supplies. Coolies 6 annas.

NOTE.—Travellers in Láhul will obtain supplies at all stages except Lingti by applying to the Thákur of Láhul at Kyélang. Elevation of rest-houses about 10,000 feet up to Kyélang.

B.—NOT PASSABLE BY MULES.

I.—Láhul to Spiti.

Route to Spiti.

1.	Zingzingbár to Dokpo Gongma.	...	Six hours' journey. Cross Báralácha Pass, 16,047 feet.
2.	Dokpo Yogma ...	...	Five hours' journey.
3.	Chandra Tal ...	...	Six hours' journey.
4.	Losar ...	...	Eight hours' journey. Cross Morang Pass, 15,000 feet.

NOTE.—This route is across several torrents which rise high during the day. There are no roads and no villages. Supplies including grass and wood are taken from the terminal stages. Coolies Re. 1-12-0. *Lambardár's* fee 4 annas.

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Route to Spiti.

II.—Naggar to Spiti.

		Miles.	
1.	Jagatsukh ..	8	Post Office, 6,000 feet.
2.	Chika ...	9	10,000 feet. Fallen wood available.
3.	Chatru ...	10	Cross Hamta Pass, 14,000 feet.
4.	Phuti Runi ...	8	In the Chandra Valley.
5.	Kárcha ...	9	Cross Shigri glacier.
6.	Losar ...	12	Cross Kúnzom Pass, 15,000 feet. First village in Spiti, 13,300 feet.
7.	Kioto ...	9	Cross Spiti River by ford.
8.	Kyíbar ...	11	Inner Line is met here and permission to cross must be obtained, except by officers on duty, from Deputy Commissioner, Dharmsála.
9.	Kázé ...	8	
10.	Dángkar ...	15	
11.	Pog ...	8	
12.	Lári ...	11	

NOTE.—The coolie hire from Jagatsukh to Losar and *vice versâ* is Rs. 2-12-0. The *lambardár's* fee is 4 annas. Supplies to be taken on from Jagatsukh (or Losar on the return journey).

POST AND TELEGRAPHS.

Post and Telegraphs.

The telegraph line runs from Mandi to Bajaura, Kulu and Naggar, all of which places are connected direct with Lahore and with other offices in Kángra District. The engineering of the line is under the Superintendent of Telegraphs, Engineering Branch, Delhi, while the offices with the post offices are controlled by the Superintendent of Post Offices, Kángra Division. The sub-offices with their branches are :—

Sub-offices.	*Branch offices.*
Duff Dunbar (at Manáli).	Kyélang.

(Mails go to and from Kyélang every other day for nine months in the year.)

Naggar.	Jagatsukh.
Kulu.	Bhuntar, Katrain, Dobhi, Raisan, Bandrole, Maní-karan.

(Mails go to and from Manikaran every other day.)

Sub-offices.	*Branch offices.*
Banjár	Chawai, Dalásh, Nirmand.

(Mails go to and from Nirmand every other day.)

Post and Telegraphs.

There is a branch office at Ani, linked with the Sub-office Kotgarh, Simla District. With the exception of Kulu Post Office all the above offices are run at a loss, and so is the carriage of fruit.

Nearly all the fruit which leaves Kulu goes by post, and coolies carry the baskets in *kiltas* to Pálampur (72 miles) in 30 hours: thence motor-lorries take the traffic a similar distance in 6 hours to Pathánkot. 41,000 fruit parcels were conveyed by the Department in this way during 1915-16.

The extension of the telegraph line from Bajaura to Banjár is contemplated, and when the new Lárji-Mandi road is completed the postal arrangements will be very much facilitated.

SECTION H.

Famine.

Famine proper is unknown in Kulu, and there have never been any special arrangements made for dealing with a regular famine. Owing to the facility with which the people of the more insecure tract of Outer Saráj can obtain work in Simla and other places and to the inaccessibility of Saráj from the Punjab, the very great scarcity experienced in that *wazíri* in 1907-08 was not recorded as a famine though it would probably have been called so in the plains.

Chapter III.—Administrative.

SECTION A.

ADMINISTRATIVE DIVISIONS.

Administrative Divisions.

The sub-division is under the general control of the Assistant Commissioner, who is subordinate to the Deputy Commissioner of Kángra, Dharmsála. The Revenue powers of the Assistant Commissioner are those of a Collector. The tahsil of Kulu is in the charge of a Tahsíldár and a Náib Tahsíldár, and to this tahsil belongs all the revenue and executive work of Láhul and Spiti. Saráj tahsil is in the charge of a Náib Tahsíldár, and is called a sub-tahsil in consequence, but the revenue work there is not supervised by the Tahsíldár of Kulu and the tract is a separate tahsil for all practical purposes. When the Náib Tahsíldár of Saráj is on tour, the routine work of the tahsil at Banjár is done by the *office kánúngo*, who also manages the sub-treasury at those times. There is a sub-treasury at Kulu, in the charge of the Tahsíldár and his Náib. There are four *field kánúngos* an extra one having been sanctioned in view of the increased work of checking the outturn of opium. The circles correspond roughly with the tracts of Outer and Inner Saráj, Rúpi and Kulu Proper, the last-named including Spiti. The attestation of revenue records in Láhul has now been entrusted to Thákur Mangal Chand with powers as a Náib Tahsíldár in cases which do not concern his family: the remainder, and those in Spiti, are attested by the Assistant Commissioner.

The Assistant Commissioner as Sub-divisional Magistrate tries first class cases, and is given special powers under section 30 of the Code of Criminal Procedure: he hears appeals from all the other Courts except the First Class Magistrates. The Rái of Rúpi and the Rái of Dalásh are Honorary Magistrates and Civil Judges of the first class. The Tahsíldár of Kulu has second class powers as a Magistrate, second grade powers as Assistant Collector, and third class powers as Civil Judge. The Náib Tahsíldárs have 3rd class jurisdiction as Magistrates and Civil Judges and second grade powers as Assistant Collectors. The Thákur of Láhul is an Honorary Magistrate and Civil Judge of the third class. The Nono of Spiti can try all criminal cases under the Spiti Regulation but can only inflict fine, and has no Civil or Revenue jurisdiction.

The Sub-Registrars consist of the Tahsíldár and Náib Tahsíldár of Kulu and the Náib Tahsíldár of Saráj. The work is light.

There are two police thánas at Kulu and Banjár, under the Superintendent of Police, Kángra: in his absence the Assist-

ant Commissioner exercises a certain amount of informal control of the police. Until the autumn of 1917, there was a sub-jail at Kulu under the superintendence of the Assistant Surgeon, but for administrative reasons the institution has now been abolished. There is no Court-of-Wards in Kulu. There is one Sub-Inspector of Excise, and a scheme is being worked out for a larger participation on the part of the field *kánúngos* in excise matters.

CHAP. III. Section A.

Administrative divisions.

List of Officers who have held charge of the Kulu Sub-division.

Name.	From	To
Major Hay	1853	1857.
Mr. G. Knox	April 1858	October 1860.
Captain Mercer	1861	1861.
Mr. J. B. Lyall	May 1862	June 1863.
Mr. Jones	1863	1863.
Captain Smyly	1864	1864.
Mr. G. Smyth	1865	May 1866.
Mr. W. Coldstream	May 18 6	July 1867
Mr. Chas. Rivaz	1867	1868.
Mr. W. M. Young	1868	April 1869.
Captain A. F. Harcourt	April 1869	March 1871.
" C. McNeill	March 1871	March 1874.
Mr. R. I. Bruce	March 1874	March 1876.
Mr. R. Clarke	March 1876	April 1878.
Mr. G. L. Smith	April 1878	April 1880.
Mr. Alex. Anderson	April 1880	April 1882.
Mr. L. N. Dane	April 1882	November 1884.
Mr. Alex. Anderson	November 1884	January 1885.
Mr. D. C. Johnstone	January 1885	September 1887.
Mr. A. H. Diack	September 1887	December 1890.
Lala Moti Ram, Extra Assistant Commissioner.	December 1890	April 1891.
Mr. A. H. Diack	April 1891	November 1891.
Mr. M. W. Fenton	November 1891	April 1892.
Mr. H. A. Rose	April 1892	February 1894.
Mr. C. M. King	February 1894	March 1896.
Mr. P. D. Agnew	March 1896	September 1897.
Mr. C. H. Harrison	September 1897	February 1900.
Captain B. O. Roe	February 1900	November 1900.
Mr. F. Yowdall	November 1900	April 1901
Captain B. O. Roe	April 1901	October 1901.
Mr. B. T. Gibson	October 1901	April 1902.
Mr. E. A. A. Joseph	April 1902	March 1904.
Mr. H. Calvert	March 1904	July 1905.
Mr. R. B. Whitehead	July 1905	October 1905.
Mr. H. Calvert	October 1905	June 1906.
Mr. F. W. Skemp	June 1906	October 1906.
Mr. H. Calvert	October 1906	March 1907.

CHAP. III. Section A.

Administrative divisions.

List of Officers who have held charge of the Kulu Sub-division—
concluded.

Name.	From	To
Mr. G. C. L. Howell	... March 1907 ...	February 1910.
Mr. J. Coldstream	February 1910 ..	November 1911.
Mr. H. Fyson	.. November 1911	January 1912.
Mr. J Coldstream	... January 1912 ...	March 1913.
Major M. L. Ferrar	... March 1913 ...	December 1914.
Mr. H. Fyson	... December 1914 .	April 1917.
Mr. H. L. Shuttleworth	... April 1917 ...	To date.

The administration of the Forests has been described in Chapter II—C.

In former times there was nothing like village autonomy. There are few large villages and the country was controlled first by Thákurs, then by Rájás, and then by the British Government direct.

Begár.

The system of *begár*, or obligation to supply the necessary minimum of food and carriage for travellers, has continued in the hills from very early times. Without giving a complete history of *begár*, it may be said that the burden has been progressively lightened in Kulu, under British rule, until it has been cut down to its lowest possible proportions. The obligation falls on all landowners without regard to the size of their holdings. Certain castes are exempt from carrying loads and are so entered in the village administration paper (*wájib-ul-arz*).

The road-cess has been abolished and also the practice (*pala*) of keeping six men at each stage, in parties serving for several days together, in order to ensure a prompt supply of porterage. The system of *pala* died hard, and was only ended when Government settled to pay contractors at each stage to provide up to six men at short notice and also furnish supplies. The contractors receive from Rs. 25 to Rs. 80 per annum according to the position of the stage, and this expense falls wholly on Government. Each contractor advances money to six men to be ready to come in when called. For larger numbers, the contractor applies to the *lambardár* of the *phâti* whose turn it is to furnish coolies. The year is portioned out among the various *phâtis* according to the number of their men (*ásámi*). The burden of *begár* is unequally laid, owing to the fact that some large estates pay no *begár*: in these the owner is exempt by custom and his tenants are not liable: thus not only is the number of *ásámis* reduced, but they

CHAP. III. Section C.

have to be collected from a greater distance, beyond the exempted estates The payment, 4 annas per day, of the coolies has not been changed, except for journeys of more than usual length or involving a steep climb. Mules are paid for at the rate of 12 annas per stage. The supply of wood and grass at the stages has also been regulated : a fixed amount is provided by each *phâti*, according to its size, and when that is used up the contractor obtains his supplies by private arrangement. He is allowed a profit on the wood and grass furnished by the *phâtis*, and may or may not make a profit on what he buys himself, according to the prevailing price of grass. The system works well at present, but the demand for porterage is much heavier than it was a few years ago, and seems likely to increase.

Begâr.

SECTION B.

CIVIL AND CRIMINAL JUSTICE.

Criminal Justice.

The Criminal Courts have been described in Section A. The principal criminal cases are for minor assaults and trespass and for enticement of married women. The last-named cases are usually compromised as the complainant is content with money compensation : there are very few thefts or burglaries, and very occasional murders. Forest cases have been more common of late. The criminal work is light throughout the Sub-division.

Civil Justice.

The Assistant Commissioner sits in the capacity of Sub-Judge in civil cases and hears all appeals from the other courts besides trying original cases. Ten out of eleven of the suits instituted in the sub-division are for money or movables and of these four out of five are not above Rs. 50 in value. The total value of money suits in 1916 was Rs. 84,709. Of the rest most are for land or other immovable property, while matrimonial suits are numerous and so are suits for declaration in favour of heirs of a deceased or childless proprietor against alienations by him or his widows. The land suits in 1916 were valued at Rs. 7,602, those for other immovable property at Rs. 2,248, and other suits (mostly matrimonial) at Rs. 33,660. The increase in litigation since 1915 has been large, no less than 25 per cent. in money suits, 29 per cent. in suits for immovable property, 40 per cent. in matrimonial suits and 28 per cent. in money suits by money-lenders against agriculturists. The causes are no doubt increased prosperity and knowledge of the law, especially that of limitation. Bad harvests in places have also produced a crop of money suits.

SECTION C.

LAND REVENUE.

Village communities and tenures.

CHAP. III.
Section C.
Sub-divisions of the Wazíris.

The division into *wazíris* of the tract with which we are here concerned has been described in Chapter I, Section A. As the name implies, each *wazíri* was under the Rájás governed by a *wazír* or civil governor, subordinate to the Prime Minister or *Chauntra Wazír*. The *wazíri* was sub-divided into *kothis* and each *kothi* was further sub-divided into *phátis*, and this arrangement continues almost unchanged to the present day. A list of the *kothis* and *phátis* is given in the Settlement Report of 1910—13, The origin of the name of the larger of the two sub-divisions is from the granary or storehouse in which the collections of revenue in kind from a circuit of villages were stored; from meaning the granary the word *kothi* came to be applied to the circuit of villages which supplied its contents. As the collections were made from the villages without reference to the cultivation from which the grain came, it often happened that fields lying within the territorial limits of one *kothi* were considered as belonging to another *kothi*, because their owner happened to reside in the latter. The boundaries of these circuits were consequently somewhat vague, and in the waste they were often indistinct owing to the indifference with which the property in the waste land was regarded prior to British rule. Generally, however, a *kothi* comprised the whole of a ridge or spur lying between two streams, or a strip of mountainside, between the river and the summit of the mountain range limited in the other two directions by small glens or ravines; at the revision of settlement in 1891 the boundaries were demarcated on these lines, and the anomaly of land belonging to a *kothi*, though situated beyond its limits, has now been done away with.

The boundaries of the *phátis* of each *kothi* have also now been clearly demarcated. These were formerly very vague, because the *pháti* was a sub-division not so much of the land as of the population of the *kothi* for the apportionment of the share of service or forced labour to be rendered by them to the State.

Gráon or *gáon* is not in these hills synonymous with *mauza*, as in the plains. The word is applied merely to a hamlet, or collection of houses, and the cultivation around it. The stretches of waste and forest which separate one hamlet from another are not regarded as belonging to either. The *pháti* is composed of a number of such *gráons* or hamlets, and in its primary signification as a sub-division of the people of a *kothi* took also

no account of the waste land. And, similarly, the *kothi* as an aggregate of two or more *phátís* comprising a large number of hamlets was a sub-division effected with regard only to the cultivated land and its produce.

Sub-divisions of the Wazíria.

It was the *kothi* which was taken by Mr. Barnes at the regular settlement of 1851 as his fiscal unit, equivalent to the *mauza* of the plains. Each *kothi* had borne a separate assessment under the Rájás and under the Sikhs, and it was desirable that the new assessment should follow the old lines as much as possible. As the result of the British settlement, however, the whole of the landholders of a *kothi* became jointly responsible for the payment of its assessment, although the revenue was distributed by the British officials over *phátis*, hamlets and individual holdings. This system was adhered to at the revision of settlement of 1871, and also at the revision of assessment in 1891, although at the latter it was found more convenient, owing to the large size of the *kothis* and to their including dissimilar tracts, to frame separately the new assessment of each *phâti*. By this step, however, the joint responsibility of the landowners of the *kothi* was not affected.

Village officers.

Similarly, in 1851, one headman was appointed for each *kothi* only, with the title of *negi*, to discharge the functions of a *lambardár* under the Land Revenue Act. He was furnished with assistants, one for each *pháti* (or sometimes one for two or more *phátis*), whose chief duties were to collect supplies or to summon the people to render forced labour when required. These assistants were not supposed to be employed in the collection of land revenue, although they assumed the title of *lambardar*—a title which they still hold in spite of its inconsistency with the definition of the term in the Land Revenue Act. The *pachotra* or percentage in addition to the land revenue levied for the remuneration of village officers, fixed originally at 5 per cent., was raised to 6 per cent. at the revision of settlement in 1871 and was paid in the proportion of 4 per cent. to the *negi* and 2 per cent. to the *lambardárs* who receive in addition from officers and travellers an allowance of 6 pies per porter supplied for carriage. This arrangement was continued at the further revision of settlement in 1891, when it was placed on record that the *negi* of a *kothi*, as the official responsible for the collection of the land revenue, is the "headman" within the meaning of the rules under the Land Revenue Act.

In the settlement of 1913 orders were passed raising the pay of all *negis* to a minimum of Rs. 50 per annum, and granting the *lambardárs* a *pachotra* of 3 per cent. on the land reve-

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The village officers.

nue. The *kothi* was made the estate for the purposes of Land Revenue Rule 14 and the *negi* was declared responsible for the collection and payment of the land revenue, the *pháti* being considered the estate for other purposes. The land revenue rules were also altered to obviate the necessity of following hereditary claims in the appointment of both *negís* and *lambardárs*.

The village watchmen (*chaukídárs* or *kránks*) were originally paid by a cess in grain levied on each house; and the *rákhás*, or forest watchmen, who were appointed in each *kothi* by order of Government in 1862-63, were paid in the same way. At the revision of settlement in 1891 arrangements were made for the regulation of the number and remuneration of village watchmen in accordance with the rules under Act IV of 1872, while the grain collection on account of the *rákhás* was formally converted into a cash cess of one per cent. on the land revenue—a measure which had been in practice in most *kothís* for many years. In 1913, simultaneously with the reforms in the remuneration of *negís* and *lambardárs* described above, this cash cess was abolished.

Proprietary tenures.

The original theory of property in land in Kulu was that which has been already described at length in Part I with reference to Kángra proper. The Rájá was the landlord of his whole principality, the peasants were his tenants, each for his several holdings of cultivated fields only. Their *wárísi* or hereditary tenant right was not so strong as in Kángra. A Kulu proverb, or old song, may be quoted as significant of the fact, which runs as follows: "*Zamín rái ki, ghar bai ki,*" that is, "the land is the prince's, the house is the father's." But ejections, except for treason or great crimes or failures to pay revenue, were felt to be acts of tyranny certainly opposed to the popular ideas of the Rájá's duty; so, though they seem to have not been very infrequent, they do not in any way disprove that the peasants had a right of property in their fields.

State property in waste.

There is, however, one very important difference between the tenure of land in Kángra and in Kulu. In the former, the records prepared at the regular settlement declared the waste to be the property of the village; and Government was then compelled by regard for good faith to confer upon the people valuable rights which they had never conceived as other than the State's. In Kulu the inability of the people to comprehend such an arrangement preserved for Government interests in the waste identical with those of the Rájás of old, and Mr. Lyall, writing as Settlement Officer in 1871, thus described the nature of the tenure:—

"The arable lands and certain small patches of waste in and among fields and enclosures are the property of their respective

State property in waste.

holders, against whose names they are entered in the *khatauni* or list of proprietors for each *kothi*. This property is, as elsewhere in India, subject to a several and joint liability for the payment to the State of rent or revenue in the form of a *jama* or cash assessment fixed for the term of settlement on each *kothi*. The remaining area of the *kothis* consisting of unenclosed waste and forest, streams, roads, &c., &c., is the property of the State, subject to certain rights of common or rights of use belonging by custom to communities or to individuals. The State has a right of approvement or reclamation of the waste, that is, waste land cannot be broken up for cultivation, or otherwise appropriated, except with its permission or by its order; but by the arrangement made at regular settlement all land reclaimed within the term is chargeable with a rateable share of the *jama* of the *kothi*, and the State during such term can make no increased or separate demand on its account. This arrangement refers to the revenue assessable on newly-cultivated lands only. It gives no power to the communities of the *kothis* to demand any fee or due from other persons having by custom a right of use in the waste, or to lease any such subsidiary right in the waste to outsiders in consideration of payment of a fee. Again, the State, for the purpose of forest conservancy, has a right to preserve or prohibit exercise of rights of common in a part of the forest; it has also a right to send in herds, droves or flocks to graze in the waste; but it is bound to exercise these rights and that of improvement so as not to unduly stint or disturb the rights of use previously existing."

Mr. Lyall was of opinion that it might eventually be necessary to alter this somewhat uncertain state of affairs and to confer a proprietary right in the waste of a more or less perfect character on the landholders, but he deprecated any hasty introduction of a change before a careful demarcation and classification of forests had been effected, and a system of forest conservancy devised and brought into working order. At the same time he was apprehensive of the interests of the Kulu people being injuriously affected should a very strict conception be formed of the character of State proprietorship of waste lands—a proprietorship which he regarded as a trust on behalf of the people of Kulu that had devolved upon our Government as successor to the Rájás.

At the revision of settlement of 1871, therefore, the waste was dealt with only by means of entries in the village (*kothis*) administration papers (*wájib-ul-arz*). All unoccupied waste lands were declared, with reservation of the existing *bartan* or right of use of the communities, to be the property of the State;

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State property in waste.

and it was declared that mines in such lands belong to the State. All trees in such lands were declared Government property, subject to the right of the communities to supply themselves, according to custom and forest conservancy rules, with the necessary amount of timber and fuel and leaves for fodder. Rules were laid down for the grant of *nautor* leases of such lands, or the grant of land required for the site of houses or for buildings. All lands so granted pay nothing for two, three, or four years, but after that pay at revenue rates to the common fund of the *kothi* in lieu of a share of the revenue, and such income is rateably divided by all revenue-payers of the *kothi* for the term of settlement, or until a new rating of the revenue (*báchh*) is made and the new land admitted thereto. Provision was made in these rules to prevent undue diminution in the waste area required for grazing by the old inhabitants and to protect certain kinds of land, such as village greens and places where the dead are burned. With regard to trees in fields or the enclosures of houses it was declared that they belong to the landholder, and that he can sell all except the cedar without asking permission; an exception, however, was made in the case of land known as *kut* (*i.e.*, unterraced land in the forest belonging to individual families, but only cultivated now and again at long intervals), to clear which, by selling timber, permission of officers in charge of forests was declared necessary. Again, it was declared that no one can fell (cedar) timber in groves attached to temples, except with permission, which was only to be granted when the wood was required for repairs of the temple.

Miscellaneous rights in waste lands and forests.

The right of grazing flocks and herds in the waste, which is described more fully in Chapter II, Section A, was also provided for in detail in the administration paper. As regards strangers, the grazing of beasts of burden in the waste lands alongside the high road is free to all traders or travellers on the march. In the winter and spring a good number are to be found encamped in the Beas valley. In some *kothís* the *khársu* (*Quercus semecarpifolia*) and the *morhu* (*Quercus dilatata*), those at least which grow within easy distance of the hamlets, are all numbered and divided off among the different families; the right of lopping particular trees in these *kothís* is considered to be attached to a particular *jeola*, or holding of fields, and is highly valued. The owners of rice-fields near cedar forests have a custom of collecting the dead leaves of the cedar to be used as manure. They look upon this as a right of much value. Any one may gather wild fruit, or herbs or roots in the forests. Nets are set to catch hawks along the wooded ridges of the spurs which run off from the high ranges. A *patta* or royal grant used to be required to confer a title to set these nets. Some of the

Miscellaneous rights in waste lands and forests.

present netters base their claims on old grants of the kind. Others net in their own *kothi* or in other *kothis* with the permission of the headmen of the place, though, properly speaking, the communities have no power to confer a title of the kind, or to exact any fee from any one for such use of the waste, except with the express sanction of Government. Provision was made in the *wájib-ul-arz* prepared in 1871 for the due exercise by the peasants of all these forest rights, and of others which it is not necessary to describe fully here.

Original form of tenure in respect to cultivated lands.

The form of the holdings of the Kulu peasants differs from that ordinarily in Kángra. Mr. Barnes compares the Kulu *kothi* to the *tappa* of Nádaun, and at first sight there is some resemblance. But the proprietors of the fields attached to a hamlet in Nádaun are always, or almost always kinsmen, the descendants of a common ancestor, who hold the fields in shares according to their pedigree tree and the Hindu law of inheritance. The fields also, with very rare exceptions, are entirely in a ring fence. On the other hand the proprietors of a Kulu hamlet are generally members of several distinct families. Even where there are several households, all kinsmen or belonging to one family, the title of each household to its fields often appears to be distinct in origin and unconnected with the kinsmanship. Each family or household has its holding or share of one; but such holding is not in the shape of an ancestral or customary share of the fields round the hamlet, but rather in the shape of an arbitrary allotment from the arable lands of the whole country. The fields of which it is formed do not all lie in a ring fence: most do so, no doubt, but, excepting tracts where the hamlets are very far apart, many will be found under the walls of another hamlet or away in another *pháti* or *kothi*.

All the arable lands seem, at some time or other, to have been divided into lots, each lot being of presumably equal value and calculated to be sufficient to provide subsistence for one household. The lots have now, in most *kothis*, become more or less confused and unequal; fields have changed hands; new fields have been added from the waste; some families have multiplied and sub-divided their lot, while others have got two or more into their possession; still sufficient traces everywhere remain to show what the tenure originally was. The original theory of it seems to have been that each head of a household was entitled, in return for rent or service due from him to the State or commonwealth, to a lot or share of arable land sufficient to support one household. No man wanted more land than this, as, shut in by these high mountains, land was a means of subsistence, not a source of wealth. Moreover, excepting the chief and a few high officials above, and a few musicians and outcastes below, the whole society

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Original form of tenure in respect to cultivated lands.

consisted of peasants equal among themselves, or at the most split into two or three grades only. The lot, being calculated to support only one family, was not meant to be divided, and with the house to which it was originally attached was handed down unchanged from generation to generation. If a holder had several sons, those who wished to marry and live apart would have to look out for separate lots, and the paternal house and land would pass to one son only. Such a tenure appears to have prevailed from very ancient times in the countries far back in the Himalayas which border with Tibet, or have, at one time or another, been included in that empire. What appears to be forms of it may be noticed in some parts of Chamba and in Kanáwar, in Spiti and Láhul, and in parts of Ladák.* Mr. Lyall attributed to this tenure, or rather to the same causes which have created it, the prevalence of polyandry in some of these countries, and enforced celibacy of younger brothers in others. As these countries became fully populated, and it became difficult to get new allotments, some custom restraining the increase of families would very probably be adopted

Jeolábandi, or classification of the holdings in the times of the Rájás.

From the reports of old native officials and an examination of old papers, it appears that in the times of the Rájás the land-holders were divided into two classes, *viz.*, 1st, those liable to military service; 2ndly, those liable to menial service The area of cultivated land was estimated in seed measures, the standard being a *bhár*, or load of seed. A *bhár* contained 16 *pathá* and an acre of unirrigated land required about 51 *pathá* of seed on the average. The standard measure for irrigated land was a *kánsi*, the size of which varied considerably but seems to have been equal to a *bigha*, or $\frac{1}{5}$ of an acre. The first class of land-holders consisted of Kanets, with a small admixture of Brahmans who had taken to the plough. The second class consisted of Dágís, the general name for the handicraftsmen and impure classes, answering to the *kamín* of the plains. A holding of the first class was known as a *jeolá*. The standard size of *jeolá* may be put at twelve *bhár* of land; of this, on an average, six *bhár* were held rent free in lieu of service under the name of *bartojeolá;* the rest formed the *hánsili* or revenue-paying *jeolá* on which the Rájá took rent in cash and kind. Sometimes a family holding only one *jeolá* furnished two men for service and got two *barto* or the whole *jeolá*, rent-free. A family might hold as many *hánsili jelá* as it could acquire, so long as it managed to pay the rent for them; but to hold two or more was very exceptional. A holding of the second class, that is, of a Dági family, was

* This tenure seems to bear some resemblance to that prevailing in England in Saxon times by which the arable lands were divided into allotments called Hides and like that it was probably popular in origin, the theory of the land belonging to the Rájá being superinduced as the right of feudal lord was in England.

known as a *cheti*. On an average it contained from three to five *bhár* of land, and the whole was held rent-free in lieu of service. Each *jeolá* in a *kothi* was considered to be of equal value, and, paid revenue at the same rates (which varied from *kothi* to *kothi*), the principle of the collection being that a little of each kind of produce was appropriated by the chief.

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Jeolábandi, or classification of the holdings in the times of the Rájás.

Every Kulu man ascribes the *jeolábandi*, or distribution of the fields into *jeolá*, *cheti*, &c., &c., to one of the Rájás, Jaggat Singh. But it would be a mistake to believe that there was no tenure of household allotment in existence before the *jeolábandi* was made, or that all the lands of the kingdom were redistributed to make it. The system of household allotment is much older and probably popular in origin. The Rájá merely revised and classified the holdings, with the object of regulating and simplifying the demands for feudal service and land rent, and making such demands correspond with the amount of land held. There are, however, signs in the constitution of the *jeolás* of a good deal of actual arbitrary distribution having taken place. Their present formation is not such as could have resulted simply from a natural growth, or from divisions made by self-governing rural communities.

A *dhol bahi*, or doomsday book of the holdings was prepared by the Rájá in question. It is said to have been long preserved with great care, and referred to with great respect as infallible evidence of title. Annual papers known as *chik bahís* used also to be made out in the times of the Rájás.* The *jeolás* were classified in the records according to the kind of service due from the holders, *e. g.*—

Jeolí garhiyá	...	... Garrison service in forts.
,, *chákká*	...	... Service as soldier in cantonments.
,, *házriká*	...	... Service as orderly to the Rája.
,, *tarpagar*	...	... Service as constable.

So in the case of the Dágís and *chetís*, each family had to furnish a man to bring in grass or fuel to the palace, to groom the Rájá's horses, carry loads, &c., &c. Men of the first class also had to carry loads when necessary. The men liable to military service of different kinds were formed into regiments (*misls*) with commandants called *negís*. The Dágís of each *kothi*, in the same way, had their regularly appointed officers for each branch of service.

Tenants who pay a fixed share of the produce—nearly always one-half—are known as *gháru*: those who pay a fixed rent are called *utkaru*, a term which denotes a status vaguely correspond-

Tenant rights.

* New lands broken up from the waste and not included in the *jeolábandi* were entered in these books as a *nauhsarili* or *basíki* land.

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Tenant rights.

ing to that of "occupancy tenants." In Upper Kulu tenants cultivate only one-third of the total cultivated area of the tract and the percentages held by the various classes of tenants are as follows:—

Class of tenant.	Paying no rent.	Paying revenue with or without *malikana*.	Paying fixed cash rents.	Paying half produce.	Paying fixed rents in kind.
Occupancy tenants proper	...	·02	...	...	...
Utkaru	·15	·23	3·76	·22	5·58
On condition of service ...	·30	·02	·22	·01	·19
At will	·53	1·25	7·82	5·83	·95

In Rúpi owners cultivate 60·4 per cent. of the cultivated area, and occupancy tenants 21·7 per cent.: tenants-at-will hold 17·9 per cent., paying cash on 9·05 per cent. of the total cultivation and half produce (*ghár*) on 4·29 per cent.

In Saráj, owners hold 80·29 per cent. of the total cultivation of the tahsil: and occupancy tenants 1 per cent., *utkaru* 9·5 per cent, others under favourable rates 2·38 per cent., and ordinary tenants-at-will pay half produce on 3·62 per cent.

Where the produce is divided whoever, whether owner or tenant, advances the seed, recovers it from the produce before division. and in some places half as much again is taken by way of interest. The tenant makes use of his own cattle and supplies the necessary manure; if he borrows the landlord's bullocks he is required to work for the landlord for a certain number of days in return for the loan of them. Generally the straw is divided as well as the grain, unless grass is plentiful, and the landlord does not care to take it.

Most tenants hold other land of their own, and cultivate the fields which they hold as tenants, for a year or two at a time only. Among the occupants of land held by non-cultivating Brahmans there may be found tenants who have some claims to protection, but it was only shortly before the settlement of 1891 that they appear to have become alive to the fact. Mr. Lyall noted in 1871 that they were not in much danger of being evicted, and would not lose much by it as land was plentiful, and proprietors often vainly endeavoured to get it off their hands to anyone who would pay the revenue for them. The cause of this state of affairs was possibly the pressure of *begár* or forced labour, and now that the demands on that account are less frequent and less onerous, while population has increased, proprietors do not care to part with their land except for good value. In connection with the revi-
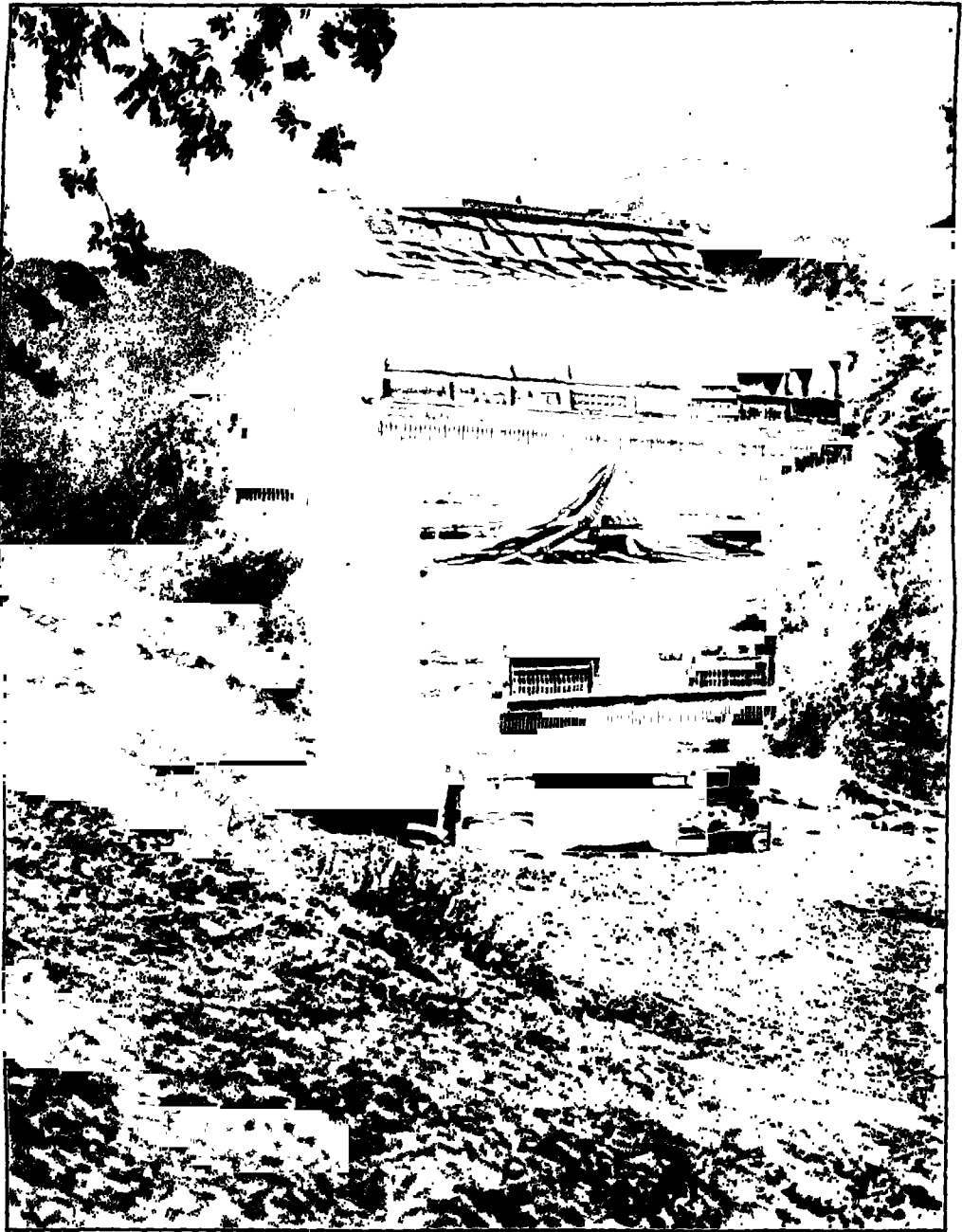
Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917.

No. 10. A temple in outer Saráj.

sion of settlement of 1891, several suits were instituted for the establishment of occupancy rights, but a title was rarely established. With respect to eviction it is customary for the proprietor to give notice at the time one harvest is cut, if he does not intend the tenant to cultivate the next; and with respect to land which gives two harvests in the year, if the tenant manure the land for one harvest he must be allowed to cultivate the next harvest as well.

Tenant rights

Tenures of land alienated to temples.

A large area was assigned by the Rájas as endowments in perpetuity to temples and idols, and at present about one-seventh of the whole cultivated area of Kulu continues to be so held. In conferring land as an endowment, the theory appears to have been that the Rája divested himself of his lordship or proprietorship, and conferred it upon the idol or shrine. The cultivator thenceforward paid rent and did service in respect of such lands to the shrine and not to the Rája. Up to the present day neither the priests nor servants of the shrine, nor the cultivators of the fields, make any claim to be called proprietors of the endowment lands, though most of them claim a hereditary tenancy of office or of the cultivation. They seem in fact to consider that to make such a claim would be an act of profanity on their part, which might bring down upon them the wrath of the particular divinity to whose shrine the land is assigned.

Temple endowment lands are occupied by tenants of two classes: 1st, tenants holding *barto* or fields rent-free in lieu of service; 2nd, tenants paying rents. The first class are considered to hold during service, and some are hereditary servants, while others can be dismissed by the managers of the shrine. The office of *pujári* is almost always considered hereditary, and in most cases the musicians and florists have held from father to son. The other officials and servants have not ordinarily had any hereditary connection with the shrine, and are understood to hold for life only in the case of *kardárs* or managers, or during pleasure of the manager or council of persons interested in the shrine in the case of the *chelás*, attendants and handicraftsmen. But even the hereditary officials would forfeit all claim to land and office by change of religion, loss of caste, or refusal or inability to perform their customary services Their heirs would, however, have a claim to succeed them if not affected by the same disability. The management of these temples and their endowments in Kulu has always been more or less in the hands of the body of hereditary votaries, which sometimes includes only the people of one hamlet, sometimes of several hamlets or of a whole *phâti* or a whole *kothi*. The *kardár* may be considered the deputy of this body. In the days of *dharmráj*, or Church and

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Tenure of land alienated to temples.

State, there was, of course, an appeal to the Rája, whose authority in all matters was absolute. Under British rule the help of the Assistant Commissioner is frequently invoked to secure a proper return of accounts and to remove delinquent officials.

The second class of tenants, that is, those who pay rent to the temples whether their occupation be of long or short standing are generally admitted to have an interest in their holdings almost or quite equivalent to that of a proprietor of land paying revenue to Government. So long as they pay the customary rent, they cannot be evicted. They can mortgage their rights in their tenancy, and can even sell them with the consent of the landlord. No landholder in Kulu had a power of sale in former times. It is sometimes a condition of their tenure that they should perform certain services in addition to payment of rent, such as providing a man to carry loads when the idol goes on a journey, &c., &c. The rent taken is generally in fixed amounts of grain, butter, oil, &c., &c., with a little cash added; some tenants pay cash only, and some a share of the actual outturn of each field. The amount is nearly always small, and it may be doubted whether the status of such cultivators is not higher even than that of occupancy tenants, for in some cases where assignments to temples have been resumed the quondam tenants pay the revenue and cesses due on their tenancies to the *negi*, or headman direct, and render nothing whatever to the temple.

There is no body of hereditary votaries having by custom any control over the class of temples known as *thákurdwáras*. These are managed by the priestly family in charge in the same way as in other parts of India. But any Hindu might apparently invoke the interference of the Civil Court in case of misappropriation or misapplication of the endowments. In the case of the Bairágís, Gusáíns, Brahmans, Thákurs, or domestic idols, the endowment lands are virtually the property of the Bairági, Gusáín or Brahman family. They generally cultivate the land themselves, but if they have let any part to tenants, the latter will be generally found to be mere tenants-at-will like those who hold of ordinary peasant proprietors.

The few rent-free holdings in Kulu not of the character of religious endowments are held by illegitmate descendants of the Rájás, or by Panditáni Brahmans. They are almost always proprietors of the land as well as assignees of the revenue. A *m'áfidár* seems always to have become a proprietor in the end in Kulu,—in fact there is reason to believe that in former times he was considered to be in a way proprietor from the moment of the grant.

Holdings in general.

The average size of a proprietary holding is 2 acres in Upper Kulu and 3 acres in *Wazíri* Rúpi and in Saráj. The average assessment per holding amounts to Rs. 4 in Saráj and to Rs. 5 in the Kulu tahsil. These facts may appear to indicate a heavy incidence of land revenue, but it must be remembered, on the one hand, that the smallness of the holdings is exaggerated owing to the fact that land is often held by one owner in several *phátis*, and the area stated is that of actual cultivation only, to the entire exclusion of the waste from which so many benefits are derived, and, on the other, that although the assessment is based on the marketable value of the crops, the agriculturist is often able to pay his revenue without any aid from his crops at all. A small plot of poppy will pay the revenue of an entire holding; or in the higher hamlets, where the poppy cannot be cultivated, the produce of the flocks and herds in the shape of wool and *ghi* will provide the necessary cash. The bees kept in the hives in the house-walls also lend their aid; the yield of a hive taken in the autumn is generally estimated at four *pakka sérs*, and the honey is sold at six *pakka sérs* for the rupee. Another miscellaneous source of income is the sale of the roots of *gugal* or *dhúp* (*Dalamiea macrocephala*), gentian (*karu*), and aconite (*patís*). These are brought from the higher hills and sold at a rupee or more per basket (*kilta*). Violets are also bought by *banniahs* at an anna or two for a small basketful. The edible fern is a common article of food in the spring, and is collected by the poorer people, and bartered for grain. Mushrooms when in season are sold in considerable quantities in Sultánpur, the only place in Kulu that can be dignified with the name of town. From a number of *phátis* such of the men as can be spared from farm work seek employment in Simla or in Mandi. In Mandi they are paid higher wages than coolies from elsewhere owing to their superior capacity for carrying loads. Again, by catching a hawk, by snaring a muskdeer and selling its pods, or by shooting a leopard or bear and claiming the reward, a man may secure a sum equal to one or two years' land tax.

Hay-fields or *ghásni*.

Grass is not cultivated for hay in Kulu. The steep exposed hillsides, which are too precipitous for cultivation, and which have no tree growth upon them, are covered with several varieties of grass suitable for hay. Each village and often each family has its appointed portion of the hillside as its hay preserve. The grass is cut in September or October before it seeds, allowed to dry for some time, and then carried home. If trees are conveniently near, the hay is hung from their branches in wisps to dry. Firing the hillsides in the winter is beneficial in removing the tough stalks of the past year and providing ash manure

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Right to water-mills.

for the young growth, and permission has been given by the Assistant Commissioner to burn in stated localities where there is no danger of the fire spreading to tree-clad slopes.

Water-mills in Kulu belong to whoever builds them; they used to pay a tax to the State, but this was remitted at regular settlement; and as every man in the village is a landholder, the people did not care to rate the water-mills with a share of the land-revenue. In *Wazíri* Rúpi, however, the owners of water-mills pay revenue to the *jágírdár*. The rates fixed are 9 annas per annum if the mill is sufficiently supplied with water to be worked the whole year round, 6 annas if it is worked for six months only, and 3 annas if it can be worked only in the rainy season. The total income to the *jágírdár* from this source is Rs. 125 per annum.

Payments to village menials.

Village menials hold from 15 to 20 per cent. of the total cultivated area. The average size of a menial's holding is 2 acres only, but this class possesses other means of subsistence besides land, receiving wages and customary dues from the regular land-owners. Some are paid by the job: thus the carpenter gets a contract for the building of a house, and the Kumhár is paid for the vessels he supplies, but most of them receive a grain allowance at harvest time in lieu of, or in addition to, such payment. The total of the payment made on this account by a landowner is estimated at 10 per cent. of the gross produce made up as follows: Chamár 4; Barehi 2; Lohár 2; basket-maker 1; and potter 1.

Revenue administration under the Rájás.

Under the Rájás each *kothi* had a large staff of officials, all of whom were appointed by the Rája, and paid by him in one way or another. Below is a full list of them:—

(1) A *pálsara*, in charge of the whole civil administration.

(2) A *kothiála*, treasurer or store-keeper.

(3) A *panjauli* who collected supplies for the royal kitchen, milk, curds, wood, &c.

(4) A *katt*, or accountant.

(5) A *jatáli*, or messenger and watchman.

(6) A *seok*, who managed and distributed the *begár*, or forced labour. In Saráj this official was called a *bhatangru*.

Besides these there were the *negís*, who were military commandants, but some of whom may, nevertheless, be ranked as village officials; for instance, the *negís* who commanded the *misl*,

Revenue administration under the Rájás.

or militia regiments of the *kothis*, and some of the Garhiya *negis* who commanded particular hill forts. These old administrative arrangements were in great part thrown aside, and destroyed during the three or four years of Sikh occupation.

Revenue assessment under the Rájás.

The *jeolábandi* or classification of tenures under the Rájás has already been described on pages 150, 151. As there stated, all *jeolás* in the same *kothi*, or same part of a *kothi*, were originally considered to be of equal value, and assessed at the same amount; but the rates differed much in different tracts, and some *jeolás* of exceptionally inferior land known as *athárki jeola*. only paid cash and not all the regular items. Mr. Lyall thus details what he believes to be the average revenue taken in Rájás' times on a six-*bhár hánsili jeola* of irrigated land:—

Name of item. *Amount.*

1. *Bharan* at 1 *dabúá* per *bhár* = 6 *dabúás*, or two annas.
2. Grain, wheat—4 *bhár* in Kulu or 2 in Saráj.
   or barley —6 „ „ 4 „
3. *Rasoi kárú*, one rupee cash or a goat or sheep, *i.e.*, kitchen tax.
4. Oil, 5 *sérs kacha* in Kulu and 3 in Saráj.
5. *Ghi*, 4 or 5 *sérs kacha*; in Saráj only 3 *sérs*.
6. Rope, one.
7. *Reta* (soapnuts) or *mák* (pulse) from 3 *páths* to 6 *páths*.
8. *Paitan*, one rupee per annum.
9. *Rassám*, 9 *dabúás* or three annas.

The miscellaneous items varied in name and numbers in different *wazírís*. For example, in Saráj the following appear in old accounts as payable in each *jeola*:—

Public works	*Ghi* 3 *sérs*, oil 3 *sérs*.
Katha and *jag* (religious ceremonies)	2 annas.
On account of the Raghúnáth temple	1⅝ annas.
Royal kitchen	6 annas.
Royal stable	4 annas and 1 rope.

Honey was taken in some places, the principle being to take a little of everything. When the Sikhs farmed Saráj to the Mandi Rájá, Chúr Singh, who was appointed *wazír*, did away with the old assessment, and put on three rupees per *bhár* on irrigated and one rupee per *bhár* on unirrigated land. In the

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Revenue assessment under the Rájás.

irrigated tracts, particularly in the Upper Kulu Valley, the irrigated lands were divided into *kánsis*, which were separately assessed with a fixed sum of grain, *plus* a small fee in cash, at one *dabúá* per *kánsi* called *kasiyár*. The grain rent or *kar* of each *kánsi*, varied according to the quality of the land, *e.g.*, on some it was *chaubára* or *chaubara*, *i.e.*, six or four times the quantity of seed corn; on others only equal to the seed.

Summary Settlement.

At the time of annexation by the British the country was the most recent conquest of the Sikhs. The inhabitants were not yet reconciled to the rule of their invaders, and the vestiges of war and rapine were still visible in the ruined homesteads and deserted fields of the peasantry when the usurpers were themselves deposed to make way for their British conquerors. The upper part of the tract, which constitutes the valley of the Beas near its source, was settled by Mr. John Lawrence, the Commissioner of the Jullundur Doáb. The lower portion, bordering on the Sutlej, was settled by the Honourable J. Erskine. It was in this part of the *pargana* that the population displayed the greatest opposition to Sikh supremacy, and it was here accordingly that the marks of desolation were most recent and numerous. The *jama* was made progressive in order to suit the impoverished condition of the country, and the maximum was reached in three years, the term of the settlement.

Regular settlement.

At the regular settlement of 1851 conducted by Mr. G. C. Barnes no account was taken of assigned land revenue, including the whole revenue of the *jágír* of *Wazíri* Rúpi. The following table shows the *khálsa* revenue of the other *wazíris* as fixed under the Sikhs, at summary settlement and at regular settlement :—

	Sikh *Jama.*	Summary Settlement.	Regular Settlement.
	Rs.	Rs.	Rs.
Upper Kulu	25,980	25,571	25,757
Inner Saráj	7,749	9,025	9,204
Outer Saráj	13,930	13,832	13,629
Total ...	47,659	48,428	48,590

First revision of settlement.

The object of the revision of settlement of 1866-1871 by Mr. J. B. Lyall was not the re-assessment of the land revenue, but the preparation of correct records of rights. The more level cultivation was measured by chaining, as was land held revenue free, but in respect to the area not so measured, the record was still generally inaccurate, being based as before on seed measure,

on the assumption that an acre was equal to land requiring 3 *bhár* 3 *patha* of seed In some cases, however, a re-distribution of the existing land revenue was found to be necessary, and in addition there was an exhaustive investigation of the assignments of land revenue. Several assignments had lapsed in the interval, and to this cause alone is due the increase in *khálsa* land revenue found in the returns for the revision of 1871, which are as follows:—

First revision of settlement.

	Khálsa.	Assigned.	Total.
	Rs.	Rs.	Rs.
Upper Kulu	27,588	12,684	40,272
Inner Saráj	...	...	10,047
Outer Saráj	...	...	17,552
Total ...	50,700	17,171	67,871

Undemarcated waste was now formally recorded as Government property, and rules were framed to regulate the breaking up of the waste in the future.

The *Wazíri* Rúpi *jágír*.

With regard to *Wazíri* Rúpi at the time of the first regular settlement of Kángra and Kulu, the holder of the *jágír*, Thákur Singh, was a titular Rája, and consequently Rúpi was not brought under settlement. On Rája Thákur Singh's death in 1852, as his son and heir, Gyán Singh was not his son by a Ráni, half the *jágír* was at first resumed, but three years later it was decided to continue the whole to Gyán Singh who was given the title of Rái instead of Rája. In 1852 a summary settlement was effected by Mr Bayley, and the total revenue, excluding *máfis*, of the six *kothis*, was fixed at Rs. 4,959; that of the three *kothis* continued being Rs. 3,035, and of the three *kothis* resumed Rs. 1,924. When the latter three were restored to the *jágírdár* in 1856 their revenue was slightly increased to Rs. 1,931. In the former three *kothis*, Rái Gyán Singh being hard pressed owing to the temporary resumption of the other three had sought to realize more than the fixed amount of land revenue, and consequently in 1862 a second summary settlement of these three *kothis* was effected by Captain Mercer, and after him by Mr. Lyall, Assistant Commissioner of Kulu, and their revenue was raised to Rs. 3,390. The total revenue of the *jágír* excluding *máfis* was thus fixed in 1862 at Rs. 5,321, at which figure it also stood when the Kángra District was brought under revision of settlement in 1868.

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The Waziri Rúpi jágír.

In that year the *jágírdár* and the people applied to the Settlement Officer to revise their record of rights so as to bring it into accordance with the existing custom. The effect of the change was to do away with joint responsibility within the *kothi*, the *jágírdár* having to look to each individual landholder for payment of his quota of the revenue instead of to the community, while he was declared entitled to the revenue of all lands newly brought under cultivation.

In 1870 Rái Gyán Singh died, and subsequently advantage was taken of the minority of his son, Rái Dalip Singh, when the estate was under the management of the Court of Wards, to effect a first regular settlement of the *jágír*. The assessment in connection with this was made by Mr. Robert Clarke, I.C.S., in 1877-78, when the collections for the previous year were ascertained to have been Rs. 8,508, the increase on the assessment of 1862 being due to the lapse of sub-assignments and to the breaking up of new land. As the result of the regular settlement the net revenue of the *jágír* exclusive of *máfis* was fixed at Rs. 8,252. At the same time an exhaustive investigation was held into the nature of the revenue-free tenures within the *jágír*. It was also directed by Government that as the *jágírdár* held the *status* of superior proprietor a certain proportion of the revenue (ultimately fixed at 12½ per cent.) should be considered *táluqdari* fees, cesses being chargeable only on the balance. The result may be shown in the following manner:—

	Jágír revenue.	Assignments.	Total revenue.	Incidence per acre.
	Rs.	Rs.	Rs.	Rs. A. P.
Excluding *táluqdari*	7,225	3,246	10,471	1 1 8
Including do.	8,252	3,710	11,962	1 4 2

The settlement was made between Government and the Rái in order that the revenue on which the cesses payable to Government are collected from the inferior proprietors might remain fixed for the term of settlement. Between the Rái and the inferior proprietors the previous custom was maintained that on land newly broken up revenue should be payable to the *jágírdár*, who, on the other hand, was required to grant remissions on account of loss of land by landslips, diluvion, &c. As regards revenue-free tenures, it was decided that personal assignments were left to be resumed or maintained by the Rái, while assignments to temples could not be resumed without the sanction of Government.

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Second revision of settlement, 1891.

The whole sub-division including *Wazíri* Rúpi was placed under revision of assessment in 1888, Mr. A. H. Diack being in charge: the operations were brought to a close at the end of 1891. It was then found that in Rúpi the revenue realized by the *jágírdár* had increased not only on account of the assessment of land lately broken up, but also in consequence of the resumption of personal assignments, and the amount paid by the *wazíri*, including *tálukdári* dues, was—

		Rs.
Jágír revenue	... ...	10,213
Assignments	.. ..	2,396
	Total ...	12,609
Incidence per acre	... ...	1-3-11

In the other *wazíris* of the Kulu tahsil the total revenue was found to be the same as at revision, but the *khálsa* portion had increased to Rs. 31,178 owing to the resumption of a *jágír* held by the Ráni Phuladebi, widow of Jit Singh, the last Rája of Kulu. On the other hand, the *khálsa* portion of the revenue of the Saráj tahsil had fallen to Rs. 22,179 (the total remaining nearly identical with that of revision) mainly owing to the grant to Híra Singh of Shángri in the Simla district, the adopted son of Ráni Phuladebi and the first cousin of her deceased husband, of a *jágír* in Outer Saráj by way of compensation for the resumption of the Kulu *jágír* on his adoptive mother's death.

The whole cultivation was surveyed for the first time, with plane table and chain, and the assessment was made *pháti* by *pháti* with reference to the circumstances of each hamlet, but two general checks were applied to secure uniformity as far as practicable, and to ensure that the new revenue should be fair both to Government and to the people. The first of these was an estimate, on the basis of the area, estimated yield of crops and prevailing prices, of the value of the Government share of the produce. The Government share was officially fixed at half the net assets of the proprietor, and was assumed throughout the sub-division to be 22½ per cent. of the gross produce,* because the proprietor is always able to receive as rent from a tenant half the gross produce after deducting about 10 per cent. on account of payments to village menials. The second check was the application of rates based on the half asset estimate, but

* In applying this rates the fraction was omitted.

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differentiated to suit the various classes of soil. The rates adopted were per acre—

	Kulu except Rúpi.			Rúpi.			Saráj.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Irrigated	4	0	0	3	4	0	3	4	0
Unirrigated, yielding two crops a year	2	4	0	1	12	0	2	0	0
" " one crop "	1	0	0	0	12	0	0	14	0
" cultivated less frequently	0	8	0	0	7	0	0	7	0

The Rúpi rates were designed to bring out the revenue only exclusive of *táluqdari* dues, and so were somewhat lower than the Kulu and Saráj rates.

The test assessments brought out by the above checks were as follows:—

Tract.	Half-net asset *jama*	*Jama* by revenue rates.
	Rs.	Rs.
Upper Kulu	63,700	54,405
Wazíri Rúpi	20,547	12,912
Total tahsil Kulu ...	84,247	67,317
Tahsil Saráj	69,417	48,797
GRAND TOTAL ...	1,53,664	1,16,114

The result of the actual assessment as sanctioned by Government for a period of 20 years from 1891 was as follows compared with the regular settlement revenue, including the value of assignments ascertained in 1871 :—

	Regular settlement revenue.	Revenue imposed, 1891.	Increase per cent.	Incidence of revenue per acre.		
	Rs.	Rs.		Rs.	A.	P.
Upper Kulu	40,368	51,120	26	1	13	5
Inner Saráj	9,996	12,835	28½	1	2	4
Outer Saráj	17,552	26,005	48	1	1	2
Total ...	67,916	89,960	32	1	6	9

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Assessment of *Wazíri* Rúpi.
The *begár* formerly received by the *jagírdár*.

The revenue of *Wazíri* Rúpi, which is held in *jágír* by the representatives of the former Rájás of Kulu, for the year preceding revision of settlement was Rs. 12,609, including *táluqdari* dues, which formed one-eighth of the whole, and inclusive of the revenue which had from time to time been assessed on waste land brought under cultivation since the regular settlement of the *wazíri* made in 1878 the half asset estimate was Rs. 20,547. The revenue originally proposed by Mr. Diack was as follows:—

	Proposed revenue.	Increase on regular settlement.	Percentage of increase.	Increase on present revenue.	Percentage of increase on present revenue.	Incidence per acre of proposed assessment.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Excluding *táluqdari* ...	12,725	2,254	21½	...	...	1 4 1
Including *táluqdari* ...	14,589	2,577	21½	1,980	15½	1 7 0

Mr. Diack pointed out that the *jágírdár* was entitled by custom to receive, in addition to the cash land revenue, certain kinds of forced labour from the people of his *jágír*. The land-owners of a *kothi* were obliged to provide porters from among themselves to carry his baggage without receiving payment of any sort when he moved through their *kothis*. The *jágírdár* lives not within the limits of the *jágír*, but in the old place of his ancestors at Sultánpur, and eight men were required to be constantly in attendance there. They received their food whether they were employed or not, and the number of days in the year for which each *kothi* had to provide them was fixed.

If more than eight men were required either in Sultánpur or to carry the *jágírdár's* load on a journey even outside the limits of the sub-division, they had to be provided, and were entitled to their food only as payment. Village menials in lieu of this kind of forced labour were bound to furnish annually a fixed supply of the products of their particular handicrafts. Each house had to supply a fixed quantity of hay every year.

In regard to this *begár* the Financial Commissioner expressed his opinion that the custom was one incidental to the land tenure, it could not be said to rest on contract or on mere custom, and, accordingly, when the revenue was being re-assessed, it was open to Government to revise or restrict the custom.

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Assessment of Waziri Rupi. The begár formerly received by the jagirdar.

He proposed that the more objectionable forms of *begár* should be distinctly prohibited, and that the revenue imposed should be such as to take the change into account. The value of those descriptions of *begár* to the Rái was estimated at something over Rs. 900 per annum, and he recommended the addition of one anna in the rupee to the revenue which had been announced and distributed to make up this amount.

Government orders regarding begár in Waziri Rúpi.

While these proposals were under the consideration of Government the then *jágirdár*, Rái Dalíp Singh, died, leaving only one son, Megh Singh, whose mother was a Thákur Rájpútni concubine, and who had consequently no legal claim to succeed to the *jágír*. His succession was sanctioned by the Government of India, but subject to such limitations in regard to *begár* and other matters as might be considered proper.* The Lieutenant-Governor, Sir Dennis Fitzpatrick, then dealt with the Financial Commissioner's proposals in respect of *begár*. He did not think that it should be abolished altogether, and he felt that consideration should be shown to ex-ruling families who have now sunk to the position of *jágírdár*, so far as this could be done without harassing their dependants. He agreed with the Financial Commissioner that the arrangements by which the *jágírdár* was supplied free of charge with a fixed quantity of hay by the *zamindárs* of the higher class and of the products of their handicrafts by the menial classes of proprietors should be allowed to continue, as these articles might fairly be considered to be a portion of the demand, and were such as the *jágírdár* might have difficulty in procuring, except from the people of his *jágír*. On the other hand, the right of the *jágírdár* to porterage while on tour within the limits of his *jágír*, which the Financial Commissioner had proposed to recognise, was considered too indefinite to be allowed to continue in its old shape, and it was directed that limitations in its exercise should be prescribed. The practice of employing men without payment as carriers of timber or beaters on shooting excursions or porters on journeys taken beyond the limits of the *jágír* was, in accordance with the recommendation of the Financial Commissioner, stopped, but the *jágírdár's* privilege of having eight men in attendance at his palace subject only to the condition of his providing them with food was maintained.†

It was suggested that in addition to the enhancement of the cash land revenue proposed by the Financial Commissioner half an anna on the rupee should be added in compensation for the limitations in the right to porterage for journeys within

* Government of India letter, Foreign (Native States) Department, No. 652, dated 26th October 1893.

† Punjab Government letter No. 185, dated 9th February 1894.

Begár in Rúpi. Cash assessment in 1895.

the *jágír*, but subsequently the Lieutenant-Gonernor accepted the view that an increase of one anna per rupee was a sufficient equivalent for the total curtailment in *begár*, which was brought about by these orders.*

The orders were carried out by Mr. A. Anderson, Deputy Commissioner of Kángra, with the following results :—

(1) A roster was prepared of the men required to serve at the palace, and it was found that they numbered 1,211 and the return of each to attend the palace came once in about 150 weeks. For special occasions, such as weddings and funerals, 50 coolies were allowed for ten days at a time.

(2) For tours in the *jágír* 20 coolies were allowed free. If more than 20 are taken all had to be paid for.

(3) No coolies were to be taken in harvest time except for some strong reason, and not more than 75 might be demanded then, even on payment.

(4) No coolie might be taken more than one stage from his home.

(5) Free supplies might be demanded from each *kothi* for two days at a time twice in the year.

(6) The quantities of hay and products of handicrafts required from the *zamíndárs* and from menials were carefully and elaborately recorded.

A valuation of *begár* was made by Mr. Anderson in the following way. Mr. Diack's proposed assessment was Rs. 14,539, of which one-eighth was called *táluqdári* and the remaining seven-eighths the land revenue, *i. e.*, the *táluqdári*, was one-seventh of the revenue. But properly the superior proprietor was entitled to *táluqdári* over and above the land revenue, and it should have been one-seventh of the total assessment of Rs. 14,539, or Rs. 2,077. On the other hand, the people were entitled to be credited with the value of the *begár* which they rendered to the Rái and this Mr. Anderson assumed to be Rs. 1,814, *i.e.*, the amount by which Mr. Diack's proposed land revenue demand fell below the proposed total demand. The addition of one anna per rupee on the proposed total demand which was imposed in consideration of the abandonment of certain kinds of *begár* amounted to Rs. 909, of which, by Mr. Diack's classification, Rs. 795 consisted of land revenue proper, and Rs. 114 of *táluqdári*. The sanctioned *begár* was, therefore, valued by Mr. Anderson at Rs. 1,814, less Rs. 795, or Rs. 1,019 per annum. This sum was distributed over the villages and holdings of *Wazíri* Rúpi, but

* Punjab Government letter No. 50, dated 14th March 1895.

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Begár in Rúpi. Cash assessment in 1895.

was not to be realized except from such persons as neglected to furnish *begár* and to the extent to which they failed to furnish it. It was provided in the *wajib-ul-arz*, as amended by Mr. Anderson, that—"If a landowner liable to render *begár* fails to do so a revenue officer, on proof of such failure, shall determine the portion of the land revenue remitted which is represented by the service in respect of which the landowner is in default, and the amount so determined shall be regarded as arrears of land revenue."

There were also provisions supplementary to this. As the result of these changes the land revenue of Rúpi was increased from Rs. 12,725 by Rs. 795 to Rs. 13,520, and the *táluqdári* from Rs. 1,814 by Rs. 114 to Rs. 1,928, giving a total of Rs 15,448 realizable in cash by the *jágirdár*. The additional sum remitted in lieu of *begár* (*jámá m'áfi ba'iwaz begár*) was put at, not Rs. 1,019, but Rs. 965 land revenue, which was a more workable sum, being one anna per rupee of the total demand realizable, and one-seventh of that, or Rs. 138, as *táluqdári* total Rs. 1,103. Cesses are realized on the land revenue only, and not on *táluqdári* and they are collected only on the revenue realized, and not on the revenue remitted in lieu of *begár*, and similarly the *táluqdári* payable on the remitted revenue is only realized in cases where the remitted revenue is realized as the result of failure to render *begár*.*

The income of the *jágirdár* was somewhat increased apart from the enhancement of the land revenue by the concession to him of the *táluqdári* payable on land, the revenue of which is assigned to temples or to individuals. This concession, which is only just as the *táluqdári* is in recognition of superior proprietary right, was refused at the regular settlement of 1878, on the ground that the assignments of land revenue had then been considerably cut down by resumption.

Cesses in 1891.

The following cesses were levied in addition to the land revenue:—

	Per cent. Rs.	A.	P.
Patwár cess	5	3	4
Negi's fees	4	0	0
Lambardár's fees	2	0	0
Rákhá's fees	1	0	0
Local rate	9	6	0

The reassessment of the land revenue and the revision of records was sanctioned in 1910 and carried out by Mr.

* Letter No. 1579, dated 18th March 1896, from the Senior Secretary to the Financial Commissioner, to the address of the Commissioner of Jullundur.

Third revision of settlement, 1910-13.

Procedure.

J. Coldstream, I.C.S., in 1910-13. The procedure ordered was that a preliminary report should be submitted suggesting commutation prices, rates of yield, and the cycle for the produce estimate from which figures a "half net asset" estimate of the proper demand for each *phâti* was to be calculated. The report was also to propose soil rates (*táluqa* rates) justified by these figures and by the kinds of crops grown on each class of soil. As soon as orders on this preliminary report were passed the work of assessment was to be completed and the new demand announced.

Maps.

Remeasurement was confined ordinarily to new fields found wrongly mapped after testing by chain measurement. In only one *kothi* was complete remeasurement found necessary. The classification of the soil into seven classes, three of irrigated and four of unirrigated land, has already been described. The commutation prices, to which reference has already been made on pages 112-116, were admittedly far below the prices actually prevailing when the preliminary report was submitted but showed an effective rise all round of 41, 40 and 45 per cent. above the prices adopted by Mr. Diack for the produce estimates for Upper Kulu, Rúpi and Saráj, respectively. The rates of yield assumed have also been mentioned on page 95. The produce estimate was based on the returns of the 19 years from (*kharíf*) 1891 to (*rabi*) 1910, a period containing two years in which rainfall was seriously deficient.

Classification of soils.

Commutation prices.

Cycle for produce estimate

Half-net asset produce estimate.

The Government share of the gross produce was assumed to be 22 per cent.* the proportion fixed by Mr. Diack in working out his estimates. The value of this share of the three *wazíris* as stated in the final settlement report was Rs. 1,03,450 for Upper Kulu, Rs. 30,770 for Rúpi, and Rs. 33,020 and Rs. 1,01,515 for Inner and Outer Saráj, respectively. It was not imagined that these estimates could be used as guides to the demand which the tracts could fairly be asked to pay and the calculations were useful only as a comparative test of the incidence of the demand in different *phátís* of a similar character.

Táluqa rates.

As a practical guide in assessment the following soil rates (*táluqa* rates) were adopted :—

Rates per acre.		Upper Kulu.			Inner Saráj.			Outer Saráj.			Rúpi.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Irrigated (*Ropal*) ...	I	5	8	0	4	0	0	5	0	0	4	0	0
	II	5	0	0	3	8	0	4	0	0	3	8	0
	III	3	8	0	3	0	0	3	8	0	3	0	0
Unirrigated (*Bathí*)	I	3	3	0	2	2	0	2	2	0	2	8	0
	II	2	4	0	1	8	0	1	6	0	1	14	0
	III	1	4	0	1	0	0	1	0	0	1	4	0
	IV	0	10	0	0	8	0	0	8	0	0	9	0

* NOTE.—As explained on page 161 above and the foot-note there.

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Comparison of soil rate with produce estimate (1912).

In Upper Kulu the *táluqa* rate for irrigated land (*ropa*) was slightly more than the "half-asset estimate" for a crop of rice, while the unirrigated rates were well below the theoretical Government share of the value of the crops commonly produced by each class of land, the rate for the poorest soil being merely nominal. In Saráj and Rúpi the rates fell short by even more than in Upper Kulu, of the rates justifiable by the assumed value of the crops grown, for it was manifestly unpractical to frame rates supported by the "half-net assets" estimate where this last was about double the amount which could reasonably be taken. But in no case was it seriously attempted to base the soil rates on a strict valuation of the Government share of the produce; the purpose was, rather, to draw up scales of rates which when applied to the cultivated area of the tracts would bring out a fair revenue demand for each tract as a whole, and, by reflecting the comparative value of the various classes of soil, would also be guides to the manner in which the demand should be distributed over *phátís*.

Estimate of revenue by *táluqa* rates.

The rates applied to the finally recorded area gave the following results :—

	Rs
Upper Kulu	67,941
Inner Saráj	15,753
Outer Saráj	34,268
Rúpi	19,318

Preliminary estimates and orders

In the preliminary report mentioned in the beginning of this section, Mr. Coldstream had estimated the probable additions to the land revenue of Upper Kulu, Saráj and Rúpi at Rs. 14,000, Rs. 9,500 and Rs. 3,000, and the Financial Commissioner in passing orders on it had suggested a reduction of the total enhancement to Rs. 25,000. It was left to the Settlement Officer to distribute the demand among the tracts otherwise than in the proportions originally suggested, if he found such a course necessary.

The actual assessments.

The assessments were framed *phátí* by *phátí*, with reference to what appeared to be fair and reasonable in the circumstances of each *phátí* and what the people could pay without difficulty. At the same time the theoretical demand based on the produce estimate and soil rates were kept in view.

Upper Kulu.

In Upper Kulu the *táluqa* rate was found to be a maximum demand in all but the best *phátís* and it was only in the rich *wazíri* of Parol that the assessment imposed was equal to the full demand by soil rates. The demand announced in Upper Kulu was Rs. 64,015, an enhancement of 25¾ per cent., or rather less than the preliminary estimate. It falls on the cultivated area

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Assessment of 1912.

with an incidence of Rs. 2-3-2 per acre and amounts to 62 per cent. of the half asset estimate and 94 per cent. of the estimate by *táluqa* rates.

Saráj.

In Saráj the demand announced, Rs. 48,820, was equivalent to 97½ per cent. of the revenue justified by the soil rates, but to only 48 per cent. of the share due to Government according to the produce estimate. The incidence per cultivated acre is Re. 1-4-0. The enhancement in Inner Saráj was 24¾ per cent., and in Outer Saráj 26 per cent., the new demands being Rs. 16,030 in the inner, and Rs. 32,790 in the outer *wazíri*. The *táluqa* rate estimate was slightly exceeded in Inner Saráj where the demand represented 48½ per cent. of the estimated "half assets." In Outer Saráj the new demand fell short of the *táluqa* rate estimate by 4 per cent. and was equivalent to half the produce rate estimate of the Government share.

Assessment of orchards in Upper Kulu.

It was Mr. Coldstream's intention at first to assess the orchards in Upper Kulu at special rates in view of the comparatively large profits yielded by them. Subsequently, however, Government ordered a very favourable treatment of the fruit-growing industry in the valley and separate rates were not imposed. For the *táluqa* rate estimate and for the purposes of distributing the revenue over holdings (*báchh*), fruit gardens were, therefore, everywhere classed as the best quality of unirrigated land (*bathil I.*).

Rúpi, special orders.

Regarding the revision of the settlement of *Wazíri* Rúpi the Financial Commissioner had ordered that the assessments of the *phátis* should be framed so as to bring out demands of the same pitch as the assessments proposed for neighbouring and similar *phátis* in Kulu and Saráj. These were to be raised by a sixteenth so that they might be in excess of that pitch by the same proportion as the assessments, as revised in 1895, were above those imposed in 1891, and the whole sum was to be announced as the new demand for each *pháti*, divided between land revenue and *táluqdári* in the proportion of seven-eighths and one-eighth. A sum equal to one-seventeenth of this total was to be entered in the record over and above this announced land revenue and *táluqdári* as the assessed value of the *begár* for which the *zamíndárs* were still liable to the *jágírdár*.

The *táluqa* rates had been originally framed so as to bring out a demand, which, when increased by one-seventh on account of the *táluqdári*, would be a fair revenue demand for the *wazíri* and these rates would have justified an assessment, excluding *táluqdári*, of Rs. 19,318.*

*Rs. 16,695 was the estimate on the basis of the area assumed in the preliminary report. But when applied to the area as finally measured the rates gave Rs. 19,318.

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Actual assessment of Rúpi *Wazíri.*

But when the Settlement Officer came to assess the *phátís* he found that had the cultivated area not increased considerably more than assumed in his preliminary report, the increase of Rs. 3,000 there proposed would have been excessive. It was only in the richest *phátís* that the full amount brought out by the *táluqa* rates would be imposed. In the poorest and most remote *phátis* no increase was possible except on account of new cultivation, and, generally, the assessment had to be kept well below the *táluqa* rate estimate. The result was that the new demand for the *wazíri*, excluding the *táluqdári* but including the amount of commuted *begár*, actually fell short of the *táluqa* rate estimate (Rs. 19,318) by 13½ per cent., instead of being, as might have been expected, slightly above it. In one respect the orders of the Financial Commissioner were not strictly adhered to. For sake of convenience, as cesses are calculated only on the land revenue proper and not on *táluqdári*, the former was announced as the land revenue, to avoid fractions, the people being informed at the same time of the additional (one-seventh) amount, payable on account of *táluqdári*.

The land revenue announced was Rs. 16,735, an increase on the previous assessment of 23¾ per cent., but only 54½ per cent. of the produce estimate of the fair demand. Excluding *táluqdári* it falls at the rate of Re. 1-7-3 on each cultivated acre. With the *táluqdári* it amounts to Re. 1-10-7 per acre of cultivation. No alteration was made in the recorded rights of the *jágírdár* who takes revenue at sanctioned *pháti* rates for new cultivation and taxes water-mills at previously prevailing rates.

Summary of results in Upper Kulu, Saráj and Rúpi.

The statement below tabulates some of the details given above and shows the results of Mr. Coldstream's assessment in a convenient form :—

Wazíri.	CULTIVATED AREA IN ACRES.		ASSESSMENT.					Incidence of new demand per acre of cultivation.
	1891.	1912.	1911.	1891.	Half-net assets, 1912.	*Táluqa* rate estimate, 1912.	Sanctioned assessment, 1912.	
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.
Lag Mahárája	8,171	8,621	9,725	9,720	30,048	17,585	13,585	1 9 3
Lag Sári	5,213	5,603	9,710	9,625	20,297	12,203	12,060	2 2 5
Parol	14,401	14 926	31,695	31,544	53,110	38,153	38,370	2 9 2
Total Upper Kulu ...	27,785	29,150	51,130	50,889	1,03,450	67,971	64,015	2 3 2
Inner Saráj	11,314	12,467	12,835	12,834	33,020	15,753	16,030	1 4 7
Outer Saráj	24,301	25,927	26,005	26,005	68,495	34,268	32,790	1 4 3
Total Tahsil Saráj ...	35,615	38,394	38,840	38,839	1,01,515	50,021	48,820	1 4 0
Rúpi (excluding *táluqdári*)	10,135	11,526	12,725	13,520	30,770	19,318	16,735	1 7 3
Total Sub-Division excluding Láhul and Spiti.	73,435	79,070	1,02,695	1,03,248	2,35,735	1,37,310	1,29,570	1 10 2

The distribution of the revenue within each *pháti* was in all three tracts by classes of soil, and the proportion which the rates on each class should bear to each other was proposed by the people. These proposals were generally reasonable and differed but slightly from the previous mode of distribution. Throughout Saráj and in several *kothís* in Upper Kulu a low rate was put on uncultivated land included in holdings.

Distribution of revenue over holdings (1912).

The new demand for Upper Kulu and Saráj was announced in July and November of 1912 and that for Rúpi in February 1913. The *kharíf* revenue for 1912 was collected in accordance with it.

New demand announced.

The assessments were formally sanctioned by Government for a period of 30 years.

Period of present settlement.

The administration paper (*wájib ul-arz*) filed with the settlement records is similar to that drawn up by Mr. Diack and attested by his successors, with the exception that a new entry regarding *begár* has been made in accordance with the orders passed in 1896, which abolished forced labour on Public Works, and the orders of 1912, sanctioning new arrangements for the supply by the people of grass, wood and other necessaries for officials on tour, and travellers.

Administration paper.

Certain alterations proposed by the Settlement Officer in the system and rates of grazing dues (*tirni*) were approved by Government and introduced in connection with the revised land revenne settlement. These have already been described on page 109.

Revision of grazing dues (*tirni*).

The settlement staff of 1910—13 consisted chiefly of Kángra officials, but there was a large admixture of Kulu men. The land revenue staff is now, in the case of the Tahsíldár and Náib-Tahsíldárs, all from Kángra or the Punjab, but most of the *qánúngos* and all the *patwáris* belong to Kulu.

Settlement staff employed.

The local rate is the only cess and is fixed at Rs. 10-6-8 per cent. of the land revenue, which is the legal maximum. The *negís*' and *lambardárs*' *pachotra* is taken from the land revenue at the rate of 4 and 3 per cent., respectively.

Cesses.

A complete account of the *m'áfis* of the sub-division was prepared by Mr. Coldstream and orders on each case were obtained. The areas released for religious and social purposes are very large and date from the times of the Rájás of Kulu. Of the total land revenue of the three *wazíris* of Parol, Lag Sári and Lag Mahárája more than 15 per cent. is assigned: the great majority of the *m'áfis* are in perpetuity and for the maintenance of temple services and connected village festivals. The *m'áfi*

Revenue assignments.

Revenue assignments.

of Thákur Raghúnáthji as the paramount god of Kulu has been increased recently to cover the whole of the Kais *pháti*, in order to provide sufficient funds for the proper performance of the temple services. The revenue of *Wazíri* Rúpi is all the *jágír* of the Rái, and about one-fifth of it is *m'áfi*: the assignments to temples cannot be resumed by the Rái without the sanction of Government. Of the land revenue of Saráj 13·2 per cent. is *m'áfi* and Rs. 2,451 is assigned as *jágír* of the Rái of Shángri in *phátís* Faránáli, Dingidhár and Suidhár of *Kothi* Srígarh. Thus of the total land revenue of Kulu and Saráj about 27·3 per cent. is assigned in the form of *jágírs* and *m'áfis*.

SECTION D.

MISCELLANEOUS REVENUE.

Excise.

There is one Sub-Inspector of Excise for Kulu and Saráj, under the Assistant Commissioner. The Tahsíldárs, Náib Tahsíldárs and field *qánúngos* are also excise officers. There are only three country spirit shops, one for European liquors, three *charas* shops and one retail opium shop. The wholesale opium dealers in 1916-17 numbered 56.

Opium.

Opium is grown in all *kothis*, except those at the head of the Beás, Sarvari and Párbati valleys. Up to 1914 a tax on opium cultivation was collected at Rs. 2 per acre; up to 1910 and thereafter at Rs. 9. From 1915 the acreage tax was abolished and an export duty of Rs. 6 imposed in its place, and subsequently raised to Rs. 8. The acreage tax was paid by the cultivators and the export duty is paid by the traders at the tahsil. The change has not made very much difference to the *zamindárs* and has brought much profit to Government. Smuggling is, however, now very much harder to detect. The inspection of opium cultivation and of the transport of the drug absorbs most of the time of the Excise Sub-Inspector and much of the energies of the Revenue staff. The cultivators bring their produce to the *patwári* at the *patwárkhána* and it is there weighed and the weight endorsed on the license. The trader also endorses thereon the amount bought by him He then takes it to the tahsil on a transport pass and keeps it till he is ready to export a consignment, when he declares the amount and pays the duty. Now, opium dries rapidly soon after it is gathered and goes on drying for several months. There is, therefore, much difference between the weights recorded by the *patwári* and those calculated at export for payment of duty. The question therefore arises whether the wholesaler has falsified his books so as to show dryage instead

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917.

No. 11. Poppy-field and Village in Outer Saraj.

of smuggling, and an elaborate calculation is necessary so as to allow only for legitimate decrease in the weight; export duty is charged on the balance. But the foundation of all such calculation is the weighment at the *patwárkhána*, which has to be carefully inspected, and an intimate knowledge of the local average of outturn is also necessary in order to detect fraudulent declaration by the cultivator. The Excise official must know how crops have fared in each valley, both at the higher and the lower levels. The returns of past years are not very useful guides to outturn because the poorer crops were always ploughed up so as to avoid acreage tax, and failed areas were not entered up by the *patwáris*: for some time after the export duty was brought in the habit of not entering *kharába* continued and vitiated the figures for calculation of outturn. The salient figures for 1916, however, show that *kharába* is now being more fully registered; they are as follows:—

Tahsil	Area sown, acres	Area matured, acres.	Average outturn in seers and *chitaks*, per matured acre.	Duty collected, Rs.	Number of cultivators.
Kulu	812¼	790¾	5·5	26,341	3,535
Saráj	747½	656¼	5·10¼	28,283	5,136
Total ...	1,560	1,447	5·7	49,624	8,671

It is hoped that with increased knowledge year by year of the average outturn and of the average dryage, the possibility of smuggling will be reduced to a minimum. The monthly returns of the weight of opium held by wholesalers are a valuable aid towards detecting malpractices, and these are carefully scrutinised. The empowering of field *qánúngos* as Excise officers has considerably aided Excise work in Kulu in connection with opium.

Charas.

Much *charas* comes down from Leh to Hoshiárpur *viá* Kulu in the autumn. The drug is imported in the names of only six licensees of Hoshiárpur. These men finance the trade and also trade on their own account. The actual carriers belong to 27 firms who own the drug, but most of them are financed by the six licensees.

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Charas.

The loads consist of hard bolster-like packages, covered with goat or sheep-skins, and weigh usually over a maund (*bára*) ; the smaller packages are called *pai*.

The *charas* leaves Leh on an import pass issued by the Joint Commissioner and is either stored at the Kulu warehouse, or sent on under a fresh pass issued by the Sub-Inspector of Excise, Kulu. The accounts for 1916-17 are summarised as follows :—

	Maunds.	
Opening balance	426	
Imported	1,204¾	
		1,630¾
Transported in bond to Hoshiárpur. ...	1,220¾	
Destroyed	1	
Closing balance	409	
		1,630¾

The fees charged for storage at Kulu amounted to Rs. 549.

The trade shows no signs of falling off in spite of the heavy duty, which is now Rs. 14 per seer. The *káfilas* are sometimes very large, as much as a lakh and a half worth of property in *charas*, silks, etc., coming down in one party.

Lugri.

Lugri (rice-beer) shops are auctioned annually, and their number has been progressively reduced from 30 in 1909 to 6, all in the Beas valley.

Home-brewing is allowed on a 2-anna license and over 4,000 of these are issued annually. Drinking to excess goes on chiefly in the Upper Beas Valley and there is practically none in Rúpi or Saráj.

Income-tax.

The income-tax payers in 1916-17 numbered 96. These chiefly live at Akhára and Sultánpur. There is some difficulty in assessing Forest contractors, and shopkeepers do not produce regular accounts.

Local cesses.

Local rate is collected at the rate of Rs. 10-6-8 per cent. of the land revenue, or 20 pies in the rupee. This includes all cesses, and there is no separate cess for roads, etc.

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Section F.

Incidence and net collections.

The incidence of miscellaneous revenue lies at about Re. 1-3-0 per head of the population. The net collections in 1915-16 amounted to—

		Rs.
Excise (a) Opium	... ...	53,983
(b) Spirit	... .	1,358
(c) *Lugri*	... ...	3,210
(d) *Charas*	... ...	1,306
Stamps	... ...	53,219
Income-tax	... ...	3,839
Local rate	... ...	13,496
Tirni credited to Forests	... ...	3,784
Other miscellaneous income	... ...	3,602
Total	...	1,37,497

SECTION E.

LOCAL AND MUNICIPAL GOVERNMENT.

Local and Municipal Government

There is no municipality in Kulu and no local board. The town of Sultánpur and its outlying portions and the bazar of Bhuntar are managed by small committees who superintend the collection of *árhath* or weighment dues and brokerage on mercantile transactions, the right to collect which is farmed out at a fixed sum annually. The arrangement works smoothly and sufficient funds are raised for sanitation, watch and ward, and lighting. Only those articles are thus taxed which are brought into Kulu from down-country by outside mulemen, and the local tradesman is not affected in any way.

SECTION F.

PUBLIC WORKS.

Public Works Department.

Kulu was constituted a Public Works Sub-Division in 1894: prior to that date the works were carried out by the District Board under the District Engineer. The Assistant Engineer, Kulu, is in charge under the Executive Engineer, Dharmsála: the office has been held for many years by Mr. W. H.

Donald, of Dobhi, in Kulu. The following works have been constructed since 1894:—

I.—Roads—

(*a*) 37 miles from Luhri over the Jalori Pass to Banjár;

(*b*) 15 miles from the Dulchi Pass to Bajaura and from Lárji to Dilásni;

(*c*) 20 miles from Manáli to Rahla and near Khoksar and Jispa;

(*d*) much work has also been done on the Lárji-Mandi road in Mandi State territory by the Kulu staff.

II.—Bridges.—Almost every bridge has been built or re-constructed since 1894. The more important are the following:—

(*a*) Lárji and Utbeháli suspension bridges, and the old Bhuin bridge, which was washed away in 1905 and re-constructed by Sappers.

(*b*) Cantilevers at Khoksar, Katrain, Raisan, Akhára and Dhaman (between Lárji and Banjár).

III.—Buildings—

A.—Provincial.—Most of these were damaged by the earthquake of 1905, and have since been repaired and rebuilt; they comprise six rest-houses and seven saráis in Láhul and a rest-house at Kothi: alterations to Naggar castle: offices at Naggar for the three officers stationed there and a bungalow for the Forest Officer. At Kulu the Department have rebuilt the tahsil and thana and the rest-house, and constructed the sarái, and assistant jailor's quarters: they have completed a sarái at Bajaura, and three new Civil rest-houses on the Luhri road.

B.—Local Works—Those by the department include a distillery (now used as quarters), Veterinary Hospital at Kulu, a sarái at Naggar, a hospital at Banjár, and one primary school at Katrain.

The staff has been largely employed in neighbouring Native States, and in preparing plans and estimates when re-

quested for the District Board. The main charge is the upkeep of the Simla-Ladák road which has been described in Chapter II - G.

SECTION G.

ARMY.

Army.

There are no cantonments in Kulu and there was no recruiting of any sort until 1916, when some twenty men were obtained for regiments, and a few coolies for Labour Corps.

SECTION H.

POLICE AND JAILS.

Police.

There are two police circles in Kulu, the centres being at Kulu and Banjár, and the areas corresponding to Kulu and Saráj tahsils. There are no police in Láhul and Spiti and the Police Act is not in force in those countries. At Kulu thána there is a Sub-Inspector, three head-constables and seven foot-constables with a head-constable and four foot-constables for the treasury guard. Thirty-one cases were prosecuted in 1916. At Banjár there is one Sub-Inspector, one head-constable and six foot-constables for ordinary duty and a treasury guard as at Kulu. Eleven cases were prosecuted in 1916.

There are no criminal tribes, but recently four Bangális were arrested who had wandered into Saráj.

The first, fifth and seventh clauses of section 34 of Act V of 1861 have been applied to the town of Sultánpur.

SECTION I.

EDUCATION.

Schools.

In 1897 there were only six schools in the sub-division, consisting of a Vernacular Middle School at Sultánpur, three Primary and two indigenous schools. There are now two Vernacular Middle Schools at Sultánpur and Banjár, educating 277 boys and 2 girls, and Primary schools at the following places :—

Kulu Tahsil.

District Board **:—Nagar, Katrain, Manáli, Jagatsukh, Raisar., Bhuthi, Bhuin, Manikaran, Jallugraon, with a new school at Lod in Láhul : also a girls' school at Sultánpur.**

CHAP. III Section I.

Schools.

Aided schools.—Sharach, Garsa, Barán, Shamshi, Karján, Shálang, with an Arya Samáj Girls' School at Sultánpur.

Unaided schools are in being at Barádha, Puid and Jána, with a Sanátan Dharm school at Sultánpur.

Saráj Tahsil.

District Board.—Chawai, Sainja, Arsu, Nirmand, Dalásh, Nithar, Kharga.

Aided schools.—Nirmand, Lárji, Ortu, Karána, Ani, Dehuri, Sarga.

Unaided schools exist at Panihár and Banjár—the latter is a *páthshála* for Hindi.

The number of pupils in the elementary schools is 1,060 boys and 69 girls. At the Nagar school are at present 5 boys from Spiti and Láhul, three of whom enjoy scholarships. The desire for education is by no means universal, but is shown in many places by the growth of private schools which start without assistance.

Boarding-houses.

Boarding-houses for Primary schools are maintained at Nagar, Bhuin, Sainja, Chawai and Dalásh. The number of boarders is 8[illegible] and the yearly expenditure under this head to the District Board is Rs. 300. No boarding-house fees are charged. There are also 33 boarders at Sultanpur Middle School, and 16 at Banjár: 4 annas per mensem is charged per head at Sultánpur. The Middle School hostels are run at a cost of Rs. 70[illegible] per mensem. More boarding-houses are needed in this hilly tract.

School-houses.

There are only 11 school-houses owned by the District Board for the 17 Primary Schools and there is in several places a demand for increased accommodation. Two new Middle School buildings are required. The provision of playing grounds is a very difficult problem.

Subjects taught in the schools.

Besides the usual literary curricula, practical subjects are taught, including gardening, drawing, weaving of woollen blankets (at Ani Mission School), knitting socks and mufflers, plaiting straw shoes. The pupils in District Board Schools are encouraged by being allowed to sell their own work.

Teachers.

There is now a Normal School managed by the Canadian Mission at Dharmsála: previously teachers were passed through the Normal School at Jullundur or the training class at Sultánpur. Of the 66 teachers in Kulu, 18 are untrained and 48 trained. All but seven (who come from Kángra) are natives of the sub-division.

Scripts.

The scripts employed are Persian, Tánkri in Kulu tahsil, and Hindi. Hindi is better known in Saráj than in Kulu, where the more ancient Tánkri has survived. Tánkri is apparently one of the oldest scripts in India and is descended through Western Gupta from Brahmi, which originally came from Chaldea. It is coarsely written and very difficult to decipher, even for the writer. There are no indigenous methods of education.

Educational results.

The proportion of literates among the population of Kulu and Saráj is 8·7 per cent. These include 6 Entrance-passed men and a fair number who have passed the Middle examination. Whereas previously nearly all officials had to be imported from Kángra and other places, there is now a large and increasing proportion of Kulu men in the Government offices. Since 1911, out of 65 candidates in the Vernacular Final Examination, 64 have passed, and the teaching is particularly good at the Sultánpur Middle School.

Educational finance.

The total expenditure on education in 1916-17 amounted to Rs. 14,197 which was all defrayed by the District Board out of its general funds, assisted by a Provincial grant, except only for Rs. 619 obtained from fees.

Press.

There is no local press.

SECTION J.

MEDICAL.

Medical.

There are two dispensaries, one at Kulu under an Assistant Surgeon and one at Banjár, managed by a Sub-Assistant Surgeon.

Kulu Dispensary.

The Kulu hospital contains 10 beds and an eye-ward, with a large garden and quarters for the staff, on the edge of the Maidan. The operating room has recently been provided with tables and instruments. The average number of in-door patients is 7 per diem and of out-door 45 ; 97 selected operations were performed in 1916, of which 59 were for cataract. There are very few in-door patients in the winter and out-door patients very often attend by proxy.

Banjár Dispensary.

Until very recently this was a purely out-door dispensary, but two beds have now been provided. The Sub-Assistant Surgeon tours for half of each month in the summer. The dispensary was built as a King Edward Memorial from subscriptions. The average attendance is 27.

CHAP. III. Section J.

Banjár Dispensary.

Government provides Rs. 40 of the Rs. 60 pay of the Assistant Surgeon and the rest of the expenditure on these dispensaries is defrayed by the District Board at an annual charge of about Rs. 7,000.

Asylums.

There is no Leper or Lunatic Asylum in Kulu. A Leper Asylum is much needed.

Vaccination.

Vaccination is voluntary, as in the rest of the district : the people have taken very kindly to it, and it would be difficult to find a totally unprotected person. There is one vaccinator who is continually on tour.

Sale of drugs.

Quinine is much appreciated, but is seldom bought. The people have not yet learnt to pay for drugs and there is little in the way of subscriptions or donations for the hospitals except from the European residents.
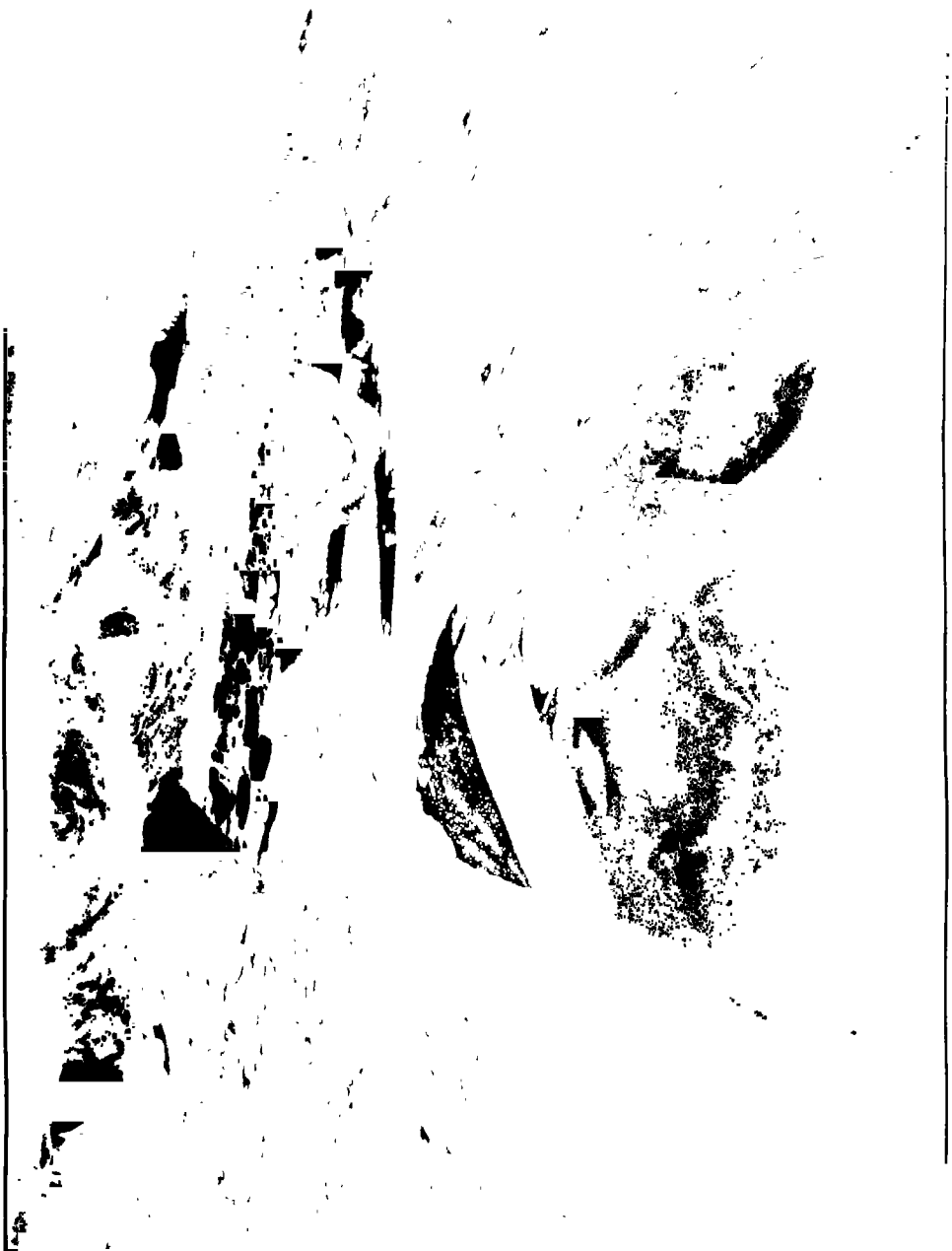
Photo-engraved & printed at the offices of the Survey of India, Calcutta, 1917.

No. 12. The Hamta Nullah.

PART III.

LAHUL.

CHAPTER I.—Descriptive.

SECTION A.

Physical Aspects.

Vernacular name.

The name Láhul is in Tibetan Lho-yul, "southern country,' and was applied by the early Ladákís to Láhul when the latter was, in a loose way, under their rule. The name covered also a portion of Chamba State, which is now called Chamba-Láhul. The people themselves call their country *Garzha*, the meaning of which is obscure.

Area and position.

Láhul comprises an area of 1,76[illegible] square miles, lying between north latitude 30°-8′ and 32°-59′ and east longitude 76° 49′ and 77°-50′. It includes the head waters of the Chenab river, with a smaller piece of territory on the north-east, the drainage of which goes into the Indus.

Boundaries.

The surrounding countries include Kashmír territory on the north, Kulu and Bara Bangáhal on the south, Spiti on the east, and Chamba State on the west. The boundary lies along high mountain ranges, through the western of which the Chenab river forces its way by a narrow valley, while on the north-east the Yunan river flows into Zángskar. There are passes on the north, east and south sides, in addition to those two channels, but they are all closed by snow in winter.

General configuration.

The shape of the tract is roughly rectangular with the Western, or Main, Himalaya on the north, the Mid-Himalaya on the south, and connecting lines of heights at either end on the east and west. These hills rise to a mean elevation of 18,000 feet, the lowest point being the Rotang Pass 13,000 feet, and the highest peaks reaching to over 21,000 feet. The Chenab river does not fall below 9,000 feet at its exit, so that the whole country is very much higher than Kulu. The river begins from the Báralácha Pass at 16,200 feet on the north-east in two branches, which flow with a general south-westerly direction till they meet and form the main stream. These branches, known as the Chandra and Bhága rivers, enclose a great triangular mass of mountains, which form the centre of the country, and are united with the northern and eastern ranges at the Báralácha Pass. The main axis of the central mass lies from north to south with a branch going west : these two lines are fringed with lateral spurs, all the intervening valleys being filled with glaciers. The peaks rise

CHAP. I.
Section A.

General configuration.

here to 21,000 feet and include the Gyéphang Peak which can be seen from Simla. The Chandra river hugs the eastern and southern ranges and has only one considerable glacier, the Shigri, on its left bank, but from the central mountains issue several enormous glaciers, including the Samundari which has two branches, each ten miles long, with a mouth two miles wide. The Bhága flows at some distance from the northern and western heights, and numerous torrents pour into it from the glaciers placed in the angle formed by those mountains, as well as a considerable stream which joins the left bank from the central mass. The Báralácha Pass is an important feature in the general configuration of the country. It is nearly 5 miles long and consists of a high neck of land connecting the central mountains with the Main Himalaya. Its name means in Tibetan "pass with cross roads on summit"—*Pára lá rtsé*,—from the fact that roads from Zángskar, Ladák, Spiti and Láhul meet on the top. The pass gives off on the north-west the Bhága river, on the north the Yunan, and on the south-east the Chandra. The Yunan crosses the pass from a glacier on the south-west belonging to the central hills and thus passes between the sources of the other two rivers, as the map shows.

Natural Divisions.

Láhul thus falls into four parts :—

(*i*) The north-eastern projection in the valley of the Yunan : this tract is uncultivated and uninhabited and has a minimum elevation of 14,000 feet. It ends in the plain of Lingti, where the Yunan meets the Serchu, a river of Spiti, and the two rivers together run north-eastwards to meet the Tsárab river before flowing north into Zángskar. It is some 100 square miles in area and through it goes the Simla-Leh trade route.

(*ii*) The valley of the Bhága: this is known in the lower parts officially as Gára (Gáhar in the Kulu tongue) and as Punan or Bunan in the Tibetan speech: the upper part is called Stód in Tibetan.

(*iii*) The valley of the Chandra, which is called Rangloi* in the lower inhabited part (Tibetan, Ránglo).

(*iv*) The valley of the joint stream, the Chandrabhága which in Kulu dialect is called Pattan, and Manchat, or "lower part," in Tibetan.

Gára contains the four *kothís* of Kárdang, Bárbóg, Kólong and Gúngrang : Rangloi, the four *kothís* of Khoksar, Sissu (or

* Rangloi and Gára are the official terms and really incorrect, the proper spelling being Ránglo and Gáhar. The former terms are kept as they have been hitherto used in official documents though they cover rather different areas from Ránglo and Gáhar.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917

No. 13. Rotang Pass with Gyéphang Peak.

A Kulu flock returning from summer grazing in Láhul over the first fall of snow in autumn.

Ránglo), Góndhla (or Tinan) and Gushál. Pattan includes the six *kothis* of Tándi, Wárpa, Ránika, Shánsha, Jálma, and Jóbrang.

CHAP. I. Section A.

RIVER SYSTEM.

The Bhága river.

From the Báralácha Pass the Bhága flows north-west and then curves round to south-west. The country is quite barren down to Dárcha (Dár tse) village which stands at the junction of the Yotse river and the Zángskari Chu or Kádo Dokpo with the main stream, at about 11,500 feet above sea level. Cultivation begins at this village and extends, mostly on the right bank, past Kólong and Kyélang to Tándi at the junction with the Chandra. On the left bank lie Bárbóg and Kárdang *kothis*. The total length of the Bhága is over 40 miles with an average fall of 125 feet per mile. The lower part is rich in cultivation, large tracts of level and arable land lying between the mountains and the river. The banks of the stream itself are steep and rocky. Kyélang on the right bank is the largest village in Láhul and is the site of the tahsil and the Moravian Mission, and a rest-house. There are rest-houses also at Jispa* and Patseo,† and a sarai at Zingzingbár near the Báralácha Pass. The capital of Láhul used to be at Kárdang village, on a fine situation opposite Kyélang.

The Chandra river.

The Chandra river rises in a huge snow-bed on the south-eastern side of the Báralácha Pass. It begins as a considerable stream (in the summer) and becomes quite unfordable a mile from its source. Looking down the valley from the Pass, there is on the right hand a vista of grand peaks and glaciers falling abruptly to the water's edge : on the left the slopes are bare with their feet hidden in long stretches of fallen débris, and rich grassy pastures below as far as the eye can reach. Lower down the Chandra Tál lies in a broad grassy plain : this lake is six furlongs in length and three in breadth and is placed between a low ridge and the main Kúnzom range, with an outlet into the river. Following a general south-westerly line for 30 miles the river sweeps round to the west whence a further course of 40 miles west and then north-west takes it to meet the Bhága at Tándi. At the westward turn the Shigri glacier crosses the road on the left bank : this is the principal obstacle on the route between Kulu and Spiti. It is a large glacier, over a mile wide, the snout is right on the river, and laden animals cannot cross it. The left bank of the Chandra is steep and bare, but there is good grazing on the right bank down to Khóksar, where the first village is met. The old village of Yari Khóksar 14 miles above that place is now deserted. At Khóksar is the first bridge over the Chandra : it carries the trade route from the Rotang Pass to the right bank. There are

* Jispa is the official name of the stage and means literally "man of Zhis," Zhis being the Tibetan word for the village.

† Patseo is the Kulu term for "stone bridge," the Tibetan translation of which, *Do zam*, is also used in describing this place.

dure springs up, but without irrigation crops are impossible and grass extremely scanty. This description, however, does not apply to the upper villages in Gára and the greater part of Rangloi where are few or no trees or bushes and the villages have a very bleak look, but the grass grows thick and green on the hills without irrigation. Near the villages on the road-sides are long dykes or walls of stone from four to five feet high, and a yard or two broad, on the top of which are placed slabs or round stones, on which the *om máni padme hum* and other Buddhist texts or *man'rás* are inscribed. *Ch'odten** or *dungten*, which are curiously-shaped conical buildings erected in honour of some saint or incarnation, or as the mausoleum or relic temple of some *láma* or great man, are found in the same situations. Above the villages, sometimes on the hillside and often under the shade or on the very face of a precipice, are seen the *gonpas* or monasteries of the *lámás* with flags flying and white-washed walls.

General character of the scenery.

GEOLOGY.

Geology.

The north-east portion of Láhul is composed of the Northern or Tibetan Division of Himalayan rocks, described in Part IV, Spiti The remainder belongs to the Central Zone which is dealt with in Part II, Kulu and Sarij. The major part of Láhul consists of these metamorphic and crystalline rocks (due to volcanic action) and only a small area near the junction of the Bhága and Chandra rivers is formed of the primeval unfossiliferous sedimentary rocks which occur between Bajaura and Plách.

BOTANY.

Botany.

The flora of Láhul is fully described in Vol. X of the Linnaean Society's Journal. It is all of an alpine nature, distinct from that of Kulu, owing to the perennial desiccation of the country caused by strong winds and light rainfall during the growing season from April to September. The varieties are very limited in number and almost all the herbs have coverings of hairs and long root systems for protection against drought.

At a height of 11,000 feet the pencil-cedar (juniper) grows freely in sheltered places in the Chandra and Bhága

* *Ch'odten* were originally sepulchres containing the relics of departed saints: nowadays the corpse of a dead *láma* is incompletely cremated and the remains, together with other relics, are stored away in a large *ch'odten* newly erected near a monastery. They are also put up as cenotaphs, in honour of some deceased saint thus buried elsewhere, and sometimes they are regarded as holy Buddhist symbol. Rich men put up a *ch'odten* over the site of the cremation of one of their family (very often in the fields) and put in relics such as clothes, old books, ornaments, etc.

CHAP. I. Section A.

The Chandra river.

several villages on the right bank as far as Sissu, and from Sissu the valley becomes more rich and cultivated, down to Góndhla. The left bank consists of high precipices with some large woods of birch, while the north side is covered with fields lying below grassy pastures. The hamlets are larger as Góndhla is approached and the houses better built, and surrounded with groves of poplar and willow. The northern mountains too take a gentler slope, but on the south opposite Góndhla the whole of the mountain side from the crowning peaks at an altitude of 20,000 feet to the river bank at less than 10,000 feet above the sea is visible; glaciers and snow fields overhang rocky steeps, which merge into grassy slopes below. At one point the cliffs descend sheer for some 4,000 feet, forming one of the grandest precipices in the world. Some forests of blue pine lie on the left bank opposite Góndhla, and there are one or two villages which face the morning sun. But the junction at Tándi is bleak and barren, a desolate site for the large Gantál Monastery which stands between the two rivers high up on the hillside. The chief tributaries of the Chandra below Shigri lie on the right bank, and issue from the Sonapani glacier opposite Khóksar bungalow and the Sissu glacier.

The Chandra-bhága.

Below Tándi, the Chandrabhága drops from 9,500 feet with a fall of about 30 feet per mile through 16 miles of length in a north-westerly direction to the Chamba border. The tract on either bank is full of villages and is more thickly populated than the rest of Láhul. The side ravines are numerous, till at the boundary a large stream, the Chakma Nála, pours in from the north by the village of Thirót.

SCENERY.

General character of the scenery.

The scenery in Láhul is almost oppressive from its grandeur, and it is wild and desolate, for the villages and cultivated lands are mere specks upon vast mountain slopes. But there is something pretty and smiling about the near view of the villages, especially in Pattan and the lower part of Gára. There is nothing striking in the flat-roofed, two-storeyed houses, which are massed together in one or two blocks, so as to give in-door communication in winter; but the clumps of pollard willows standing in plots of smooth green turf, and the terraced fields neatly kept and waving with thick crops of wheat or barley, are pleasant to look at. On the banks of the fields and under the small canals are the *dáng* or hay fields, in which the grass grows luxuriantly, mixed with bright flowers as in an English meadow, and here and there in bush or hedge are wild roses, bright crimson or bright yellow, and wild currant or gooseberry bushes. Wherever water is brought, all this ver-

valleys, and there are forests of it in *Kothi* Jálma and between Kyélang and Kolong. At a lower elevation in the Chandra and Chandrabhága valleys there are a few forests of blue pine and it is at about the same altitude that the willow and poplar trees planted beside the irrigation channels to supply fuel and fodder flourish best, but the hillsides continue to be absolutely devoid of bush or tree of any other sort. Below Jálma, a village almost midway between the junction of the Chandra and Bhága streams and the Láhul-Chamba border, the vegetation becomes somewhat thicker and more variegated; the barberry and one or two other bushes common in Kulu grow pretty thickly on the lower slopes, and the Himalayan bird-cherry (here called *karun*) begins to appear; occasionally a spreading walnut tree offers refreshing shade though it yields but a woody nut, and here and there a hawthorn may be observed. It is not, however, till the border of Chamba is reached that anything resembling the forest scenery of Kulu is to be seen; the spruce fir begins at this point to mingle with the blue-pine though the air is still too dry to suit the silver fir. Wild rhubarb of a fair quality grows freely throughout the tract, and wild gooseberries are also plentiful, but yield a sour and unpalatable fruit.

The common herbs of this zone are of the following genera: ranunculaceæ, geraniaceæ, compositæ, dipsaceæ, labiatæ, solanaceæ and polygonaceæ. *Eremus himlaicus* occurs plentifully on dry slopes, and a few ferns in sheltered moist places.

Above the zone of trees, which ends at 12,000 feet, the slopes are bare and stony, except immediately below the line of perpetual snow where they are covered in hollows, where the snow has lain long, with a profusion of short rich grass and of wild flowers. The most common genera are—saxifraga, leontopodium, allardia, stellaria, epilobium and aconitum.

North-east of the Báralácha Pass lies the plain of Lingti, a huge alluvial stretch at the junction of three streams. The soil appears to be alkaline and the flora differs in consequence from that of the rest of Láhul. On the plain itself, the vegetation is limited to a Caragana which on the sandy wastes at the north end forms mounds of spiny scrub with a beautiful golden papery bark and typical legumes, while a few plants of gentianaceæ, compositæ, and boragineæ occur near streams. The huge screes near the main ridge by Kyinlung have in sheltered corners quite a small flora of their own composed of species of stellaria and silene, astragolus, meconopsia, salvia, boragineæ, umbelliferæ, polygonaceæ, primulaceæ, with occasional shrubs of salix. Clumps of Urtica abound, looking in the distance like juniper.

FAUNA.

CHAP. I. Section A. — Fauna.

The wild animals of Láhul are not numerous. Ibex are found sometimes. They graze on the lower slopes in the winter and spring, but retreat before the advance of the flocks in the summer to their rocky fastnesses towards the summits of the mountains. They are said to come down to Patseo in the autumn to lick the salt left on the site of the great annual fair held there. They are preyed on by the grey wolf and the snow leopard. Barhal are also reported in Láhul, but no other wild sheep or goats. Hill foxes are numerous enough, and there is some trade in fox skins. Brown bears are fairly common. The licenses for shooting big game are described in Part II (page 12), and are issued by the Divisional Forest Officer, Kulu.

Marmots abound on the Lingti plain, which is honey-combed with their burrows, and an odd rabbit-like rat may be seen occasionally among the boulders on the hill side. Snow pigeons are plentiful near cultivation and chikor on the hillside; the only other game bird is the *golind* or snow pheasant which, however, is by no means common. Of singing birds there are none, and the great stillness is one of the most striking features of this alpine tract, unbroken save by the sound of rushing water and the occasional thunder of an avalanche. Snakes and other venomous reptiles are unknown. When the water in the rivers is low or where it lies in pools small fish (snow trout) are caught of excellent flavour.

CLIMATE.

Climate.

The climate of Láhul is most bracing, as the ruddy cheeks of the inhabitants testify. The air is crisp and keen, especially in the valley of the Chandra: that of the Bhága valley at Kyélang has not quite the same vigorous quality. The maximum temperatures at Kyélang range from 33·3° in February to 73·6° in August, the minimum from 13·4° in February to 50·2° in July. The mean temperatures for each month are as follows:—

		Degrees Fahr.			*Degrees Fahr.*
January	...	23·9	July	...	61·7
February	...	23·3	August	...	61·7
March	...	30·7	September		55 6
April	...	40·5	October	...	46·3
May	...	49·6	November	...	39·1
June	...	57·6	December	...	29·5

Annual ... 43·3

CHAP. I. Section A.

Rainfall.

These figures are the averages of 21 years.

As above described, Láhul is set in a básin, the edge of which consists of enormous mountain ranges. These barriers keep off the monsoon currents, causing the rain to spend itself on their south and west faces. In consequence the summer rainfall in Láhul is scanty, affecting on the average no more than three days in each month. The total rainfall during the whole season from June to September is about six inches. On the other hand nearly three times as much precipitation occurs during the period December to May, and is then associated mainly with storms of high elevation which traverse northern India from west to east, and pass over the mountains which obstruct the monsoon in summer.

The average of 26 years' rainfall and (melted) snowfall at Kyélang are given below in inches :—

Month		Inches	Month		Inches
January ..	...	2·81	July ...	...	1·39
February	...	2·86	August ...	...	1·47
March ...	...	3·84	September	...	1·93
April ...	...	3·17	October ...	...	0·52
May ...	...	2·60	November	...	0·37
June ...	...	1·12	December	...	1·00

Annual ... 23·08 inches.

EARTHQUAKES.

The earthquake of 1905 is described in Part II, Kulu and Saráj. There are no traces of it now in Láhul.

FLOODS.

Floods are not common in Láhul, but in 1836 the Shigri glacier burst its bounds and dammed the Chandra river so high that (as the story runs) guards were posted on the Kúnzom pass to watch lest the water should flow over into Spiti! There are at any rate traces of a large lake formed at the time, and the glacier has ever since lain athwart the old trade route, and is the most formidable and convincing obstacle to trade between Spiti and Kulu.

SECTION B.

HISTORY.

Original conditions.

The pre-historic Láhulas, as has been noticed elsewhere, belonged to a mixed race of Mundari aborigines and Tibetans, the amalgamation of whom must have taken place in Láhul some 2,000 years B. C. The mixed character of their origin is repeated in their history, which shows them inhabiting a country where three kingdoms meet, and ruled always by one or more of their larger neighbours.

CHAP. I. Section B.

Early centuries of our era.

The first mention of Láhul is by Hiuen Tsiang in 635 A. D., who describes it as a country named Lo-hu-lo, lying north-east of Kulu. The word is identified with the Tibetan *Lho-yúl*, or "southern country." At that time, Upper Ladák was probably under the rule of an early dynasty with the capital at Leh, and the name *Lho-yúl* must have been coined by them to denote their southern province. At the same time, Láhul was more or less under the influence of Chamba, and probably of Kulu also. It is probable, says Dr. Hutchison, that Chamba held the valley of the Chandrabhága as far as Triloknáth and possibly Jálman from early times, and that whenever the Chamba forces invaded Kulu, as they did about 700 A. D., and later, they proceeded by way of the Kukti pass and the Chandra valley, and it is quite possible that the ancient Thákurs or Jos of Láhul paid tribute both to Chamba and Ladák, as they also probably did at a later time to Chamba and Kulu. Traditions in Láhul tell of an invasion by a race of foreigners from the north, probably Yárkand, who held the country for ten years. Old tombs discovered are said to belong to that period, and similar traditions exist in Chamba, which was also invaded by the same race about 800 A D. The invaders seem to have retired or been driven out.

Foundation of Western Tibet.

The Tibetan Kingdom of Ladák was founded about 1000 A. D. by Nyima Gon who had been driven out of Central Tibet: his son Palgyi Gon divided up the realm among his sons, giving Ladák to the eldest, and Zangskár, Láhul and Spiti to his youngest son, Lde tsug gon. The latter kingdom did not however hold together long, for shortly afterwards the Kulu and Chamba Rájás invaded Láhul and drove out the Tibetans, making the Jos tributary. Tibetan influence had however established itself, and the Buddhism of India, which had entered Láhul in the 8th century, was ousted by the lamaism brought by Nyima gon from Central Tibet.

Conquest by Kulu and Chamba.

Lha chen utpala's invasion.

About 1125-50 A. D., Lha chen utpala reunited Lower and Upper Ladák and then invaded Kulu, exacting from Sikandar Pál a treaty to pay tribute in *dzos* (half-bred yaks) and iron. In spite of the help given by the King of Delhi, this treaty held firm, and remained in force at least till the time of Sengge Namgyal at the end of the sixteenth century, and perhaps later till that of Bidhi Singh. The Thákurs of Upper Láhul must have supplied the *dzos* (which are not found in Kulu), the main valley of Pattan being held at that time by Chamba. Tibetan domination of the upper valleys was clinched in the 14th century by the centralisation of the monastic system, novices being sent to Tibet for education.

CHAP. I. Section B.

Tsewang Namgyal's invasion.

Soon after the Badani dynasty was established in Kulu, in the reign of Sidh Singh or Bahádur Singh, the Ladáki King Tsewang Namgyal (about 1530-60 A. D.) invaded Kulu and "made the Chiefs feel the weight of his arm." This attack seems to have been prompted by an attempt on the part of the Kulu Rájás to throw off the Tibetan hold on Upper Láhul. Láhul is not separately mentioned in the account of this invasion, probably because it was a part of the Kingdom of Kulu, though still more or less controlled by Ladák.

Connection with Gugé.

It has been found by recent researches that Láhul never formed part of the kingdom of Gugé in Upper Kanáwar, though Spiti did. In consequence, the story as given by Captain Harcourt that it was wrested from Gugé by Chamba and Kulu is incorrect. When Gugé was conquered by Sengge Namgyal, King of Ladák (1596—1620), his younger son was given Spiti and Zangskár, Láhul not being mentioned.

Final conquest by Kulu in 17th century.

In the latter half of the seventeenth century the Ladáki Empire fell to the Mongolians, and from that time dates the control by Kashmír of the wool trade of Western Tibet. The Kulu Rája Bidhi Singh seized the opportunity to invade Upper Láhul, and brought it entirely under his sway: he also took from Chamba the whole of Pattan—the main valley down to the present boundary at Thirót. He is said to have acquired Pattan from Chamba as a dowry, but this is most improbable. Chamba would never give a daughter to Kulu, and certainly not territory as a dowry. British Láhul was probably obtained from Ladák by conquest. The people of Gushál, at the upper end of Pattan, say that Bidhi Singh took away a copper plate grant which had been conferred on them by Chamba. A Kulu Rája, at an unknown period, is also said to have attacked Triloknáth, but he was defeated by the god, who refused to be carried off. The leading house of Upper Láhul, Bárbóg, resisted Bidhi Singh and was divested of all its influence and powers. The other Jos submitted and were given *jágírs*, changing their title to that of Thákur probably at the same time. Later on they began to call themselves Rájpúts and their chronicles (but not that of Bárbóg) were altered accordingly. The Tinan chronicle however gives the name of the "Iron Castle" in Tibet, whence came the original ancestor of the Góndhla clan and his name Rána Pala only half conceals the common Tibetan name of Dpál. The Thákurs were undoubtedly Tibetan by origin.

Kulu rule.

Mán Singh about 1700 A. D. also marched through Láhul and fixed the Ladáki border at Lingti, where it now is. In 1800 a Láhula contingent is found assisting Pritham Singh against Mandi at Bajaura, when they fought under the banner

Kulu rule.

of the Gyéphang Lha, the spirit of the great peak which looks down the Kulu valley. An account of this event may be seen at the Moravian Mission at Kyélang, written in Pahári and Urdu. When Moorcroft passed through Láhul on his way to Leh in 1820, he found four villages still paying tribute to Ladák. This was probably done to preserve the peace of the border and trade connections, and the payments were continued until stopped by the British Government in 1862.

The Sikhs.

In 1840 the Sikhs took over Láhul along with Kulu and governed it in their usual extortionate fashion.

British rule.

In 1846 came British rule and an era of prosperity began for the much-tried country. Francke says that Tibetans contrast their own impoverishment under their bad system of government with the continued progress of Láhul in material matters. The country looks more and more towards India year by year, and the Thákurs have taken to Hindu customs and connections. Bárbóg however still marries into the house of the ex-Kings of Ladák.

ARCHÆOLOGY.

Archæology.

On page 201 are mentioned the interesting paintings and architectures to be found in certain monasteries, which show that they are of very ancient date. Besides these, the Rev. Francke has described in his "History of Western Tibet" the very old stone carvings near springs and other places in Pattan. He also found 23 inscriptions on rocks, which are mostly very brief, and are either invocations addressed to some god or great *lámı*, or simply give the name of some ancient King or Queen. He thinks that one inscription at Kárdang is as old as the 12th century and others he puts down to the 17th and later centuries. There are also some large rock-carvings of Buddhistic figures in various parts of Láhul, and old tombs dating from the early part of the 9th century, as mentioned on page 189.

SECTION C.

POPULATION.

Density of population.

By the last census, taken in September 1910, the population was found to number 7,760 as compared with 5,982 in 1891. Unfortunately the returns were excerpted, by order, in Lahore and not, as before, in Kulu, and it is not known how many of the people enumerated were actually inhabitants. For the purpose of the census, September is as good a time as could be chosen : in 1891 it was taken in February when a large portion of the population

CHAP. I. Section C.

Density of population.

was absent in Kulu, Mandi and other warmer regions. An accurate census is however impossible, for all the *zamíndárs* are never at home at any one time, and in the summer there are many immigrants. Assuming that the census of 1910 was approximately correct, the incidence on the area sown for food must be 1,723 persons per square mile of cultivation against 1,300 recorded in 1910. These figures are remarkable in view of the fact that although a certain amount of food-grain is imported into Láhul from the south, there is some export northwards towards Tibet, and also a considerable sale of the local produce to traders, shepherds and other summer visitors to the tract. The fact that the whole of the cultivation is irrigated and that the harvests are therefore very secure may explain how the population is able to subsist on such a relatively small cultivated area; it is also the case that the natives of these cold and sterile tracts eat lighter meals than the Hindús of the lower hills.

Growth of the population.

The difficulties of enumeration have been mentioned: the figures for the last four censuses are however—

1868	...	...	5,970
1881	...	...	5,760 in summer.
1891	...	...	5,982 in winter.
1910	...	...	7,760 in autumn.

Thus no true comparison is possible, and the real increase cannot be determined. There are also no separate statistics of migration, age, sex, infant mortality or civil condition.

TOWNS AND VILLAGES.

Towns and villages.

There are no towns in Láhul. The principal villages are Kyélang, Kólong and Kárdang in the Gára *iláqa* and Góndhla in Rangloi. The Pattan *iláqa* however contains 82 out of the 173 hamlets of Láhul. The villages do not occur higher than 11,500 feet above sea level. The houses are flat-topped and usually built against each other, to provide in-door communication during the winter. The villages are set among the fields and not on spurs of the hills as in Kulu. Some of them, such as Kárdang, occupy commanding situations.

DISEASES.

Diseases.

The diseases of Láhul include goitre and other Kulu diseases chiefly of the alimentary canal due to hard drinking. The dusty dry nature of the country causes affections of the throat and eyes.

MARRIAGE AND OTHER CUSTOMS.

Betrothal.

Negotiations for a betrothal are conducted by the father and the maternal uncle of the boy. They take a pot of *ch'áng*
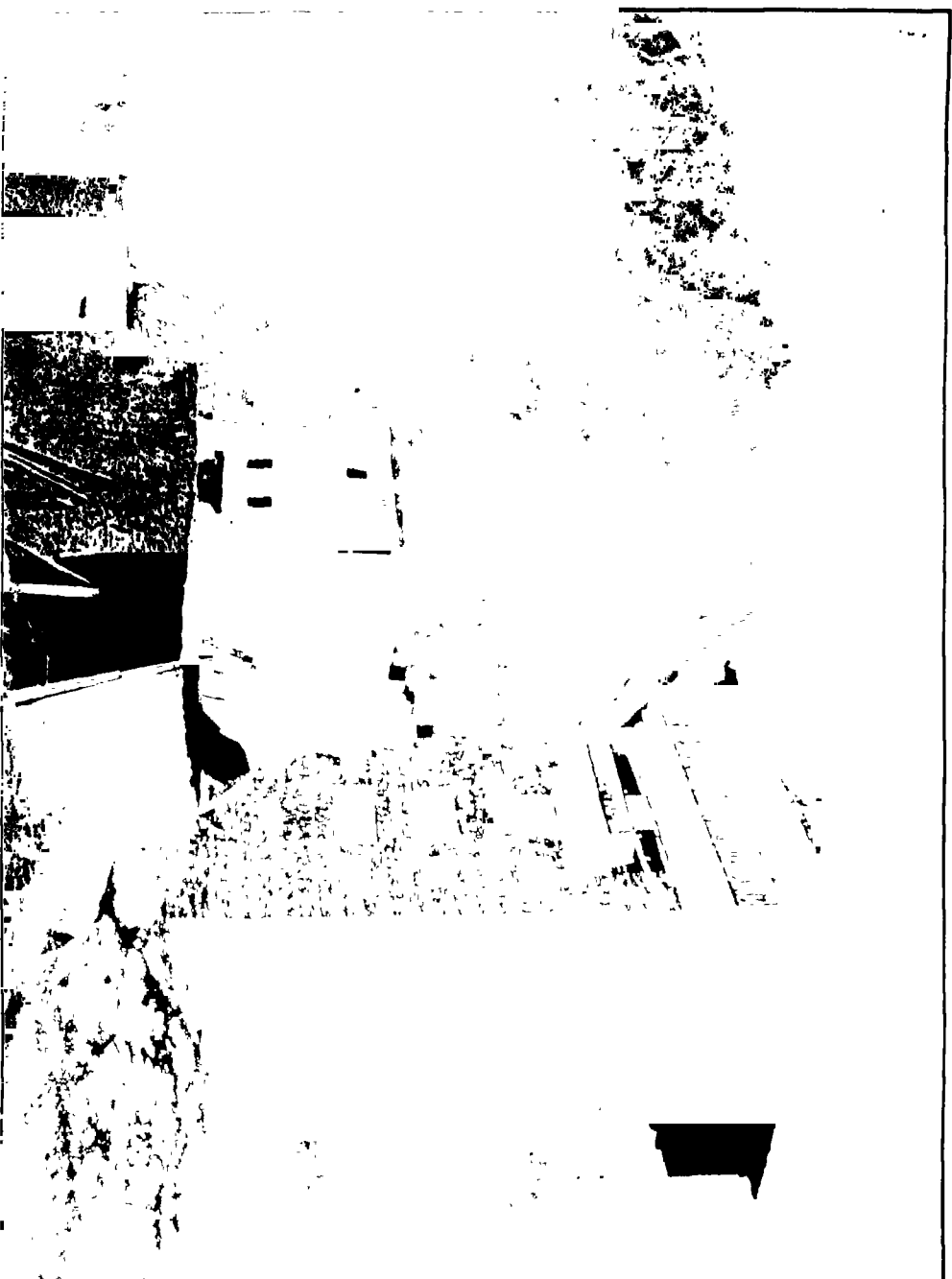
Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1917.

No. 14. House of the Thákur of Góndhla, Láhul.

and visit the parents of the girl they have picked out, and explain their intentions. The mother then goes to ask her daughter, and if she is agreeable to the proposal, her parents accept it and partake of the *ch'áng*. A refusal to drink means a final rejection of the offer of marriage. The *ch'áng* is, however, sent on two further occasions, and at the third time of asking, the payment and acceptance of a rupee settles the matter, and the day is then arranged for.

CHAP. I. Section C.

Betrothal.

The fetching away of the bride takes place at night. On arrival at the bride's house, the bridegroom, accompanied by eight or ten friends, has a little encounter with the servants of the house, who will not let him in until he has paid them a fee. Once inside, the bridegroom unfolds his gifts. His *ch'áng* is passed round, and all the bride's relatives receive part of the cake he has brought. This consists of roasted barley flour kneaded into a stiff dough with butter, and also a portion of the dried ribs of a sheep. Then the bride's dowry is presented. It may consist of up to eight or ten complete outfits of clothing, a sum of money, all the utensils required for her new home, a cow or a hybrid yak and a pony or two. The bridegroom then takes his bride to his home and on arrival they have to delay entering till the following ceremonies are gone through. As they are bound to bring some hidden evil with them from the road, the *lhápá*, or spirit medium, is engaged to counteract the evil influences of the demons (*shrinmo*). After invoking benevolence of the *lhá* this man throws from the top of the house a live sheep before the wedding party waiting outside. The sacrifice is seized by the party and heart and liver are quickly torn out, cut up, and eaten raw, the pieces being scrambled for by all the friends present. The *láma*, meanwhile proceeds with reading the *ch'os* which are calculated to scare away the evil spirit: he has brought with him a small pot with a dough effigy of the demon inside it, this he eventually breaks and kills the demon in the effigy. The party then enter the house and partake of the marriage feast, with such appetite as they may have left.

Wedding ceremonies.

Age is not considered, in the case of either sex, but poorer people marry later than their richer neighbours. The latter sometimes marry their children at the early age of eight or ten years. If the pair cannot agree when grown up, they may separate. As a rule, however, matrimonial ties are not broken and divorces or separations are rare. If a marriage turns out childless, a second wife is taken, but the first wife retains the position of honour in the house, and the second has to do the outdoor work. If a man wants to divorce his wife, he has no claim on her dowry and has to pay her a sum of money up to Rs. 100, if well off. On the other hand, the wife who desires divorce has to pay that

Marriage in general.

CHAP. I. Section C.

Divorce.

sum to her husband. A divorce is completed when the ceremony of *húdpá chádché* has been performed. The pair make a thin thread of wool and hold it by the little finger and pull it apart, saying that from henceforth they will have no more to do with each other. They may then re-marry.

Polyandry is very general, as in other countries bordering on Tibet. Monogamy is, however, the more usual form of married life, and there can be no doubt that woman is really respected in Láhul much more than in Kulu. The monks are not celibate.

Customs of inheritance.

The custom of primogeniture prevails in the Thákur families of Láhul. On the death of the father the eldest son (*gaga*) succeeds. As long as his brothers live with him, they are maintained and called *Nono*, but when they set up house for themselves, they get a small allotment of *garhpan*, under the name of *dotenzhung* or younger son's land, upon which they have to maintain themselves. After two or three generations the descendants of younger sons become like other landholders, and have to do some service or pay some rent to the Thákur. Among the subordinate landholders all sons are considered entitled to equal shares of their father's holding but in practice they seldom divide, and live on with wife, land, house and chattels in common. In Pattan, where the Hindu element prevails in the population, and where the holdings are somewhat larger and more productive, many brothers have married separately, and divided house and lands. A very few have done so in Gára and Rangloi also. In such families the custom which has hitherto prevailed, with regard to inheritance of the shares of brothers who die without issue, is quite clear ; such share has always gone to the brothers with whom the deceased lived in unison, or to his issue, to the exclusion of all claim on the part of the separated branch of the family. The most exceptional point in the custom of inheritance prevailing in Láhul is the fact that, in default of sons, a daughter succeeds to her father's whole estate in preference to nephews or other male kinsmen, provided that, before her father's death, she has not married and settled down to live on her husband's holding away from home. If she is married and living with her husband in her father's house, she succeeds, and if she is unmarried, she can hold for life as a maid, or can at any time marry and take her husband to live with her. Supposing such a husband and wife to die without issue, it appears to be doubtful who would have the best claim to succeed them ; whether the next of kin to the wife or to the husband. But it is agreed that the survivor of the two might lawfully give the estate to any member of either of the two families.

CHAP. I
Section C.

TRIBES AND CASTES.

Tribes and castes.

The word used in Láhul for a clan or tribe is *rus*, which means bone, and as applied to a class denotes those descended from a common ancestor. The tribes and castes in Láhul are distributed by race, religion, and occupation, and differ from each other in all these respects. At the head come the Thákurs, who belong to four families, and are of Mongolian origin. Three of them own *jágírs* and the fourth was once the principal family in Láhul, as is explained in detail below. Of the agricultural classes, there are Buddhists and Hindús, the two religions being much mixed: these classes consist mainly of so-called Kanets, who are principally Bhotia by race, of Brahmans who are Hindus from the south and west, and of Dágis and Lohárs from Kulu and Bangáhal. Hesís and Bálrás are insignificant in numbers.

Kanets.

The Kanet tribe is universal in Gára and Rangloi: they appear also in Pattan, where they are overshadowed by the Brahmans. In all they hold 67½ per cent. of the cultivated area. They are Mongolian by race, except for some Kanets in Pattan who came from Kángra and Kulu. They give daughters to the Thákurs and Brahmans. These are well treated by the Thákurs, owing probably to the common Mongolian origin. The Brahmans however affect to despise Kanets and to disparage their name of *Bhot-zát*. They take their daughters in marriage and the children are legitimate, but the Brahman fathers will not eat with their Kanet wives nor with their children, though they will smoke with them. The children are known as *garu* and are numerous in Láhul. Brahmans will not eat with Kanets, but will drink and smoke with them. These two tribes also smoke with Thákurs but the latter rarely smoke at all.

Brahmans.

The Brahmans predominate in the Pattan *iláqa* and call themselves *Swánglá*. They own most of the land there, but none anywhere else, and their holdings form 16¾ per cent. of the total cultivated area of Láhul. They have recently applied to be registered as agriculturists.

Dágis.

Dágis are called Shipi and are cultivators. They have no Bhotia blood and come from Kulu mostly. They assist Thákurs at marriages and funerals and are given food and clothes on these occasions. They will not eat with Lohárs or give them daughters in marriage, but they smoke with them and take their daughters.

Lohárs.

The Lohárs are called Gára in the Tibetan tongue of Kólong and Khóksar, Domba in Gára and Góndhla, and Lohár only in Pattan. They have land called *gárzhing* and do little blacksmiths' work. Iron is scarce in Láhul and there are very few tools. They are given food for smith's work, and grain at harvest accord-

CHAP. I. Section C.

Lohárs.

ing to the size of the holding of their employer. There is a legend, which has been written down in Bunan dialect by the Moravians, that Gárás were imported from Kulu, with corn-seed. The Gárás are the local jewellers and musicians as well as blacksmiths.

Hesís.

Hesís (the minstrel caste) are Mongolian: they are maintained by the Thákurs mostly, receiving Rs 6 annually and one sheep, for each family. They get food while performing. They do not cultivate land nor are they at all numerous.

Bálrás.

Bálrás are basket-makers in Pattan where they have a little land.

The leading families—Thákurs of Bárbóg.

The Thákurs of Kólong, Gúngrang and Góndhla are the *jágírdárs* of Láhul and have all been notified as observing the principle of primogeniture. The family which was most prominent before the Kulu Rájás acquired Láhul is however that of Bárbóg who keep up the custom of announcing the new year to Láhulas by burning a large bonfire. Their genealogy dates from Tsering as Agrub who was a contemporary of Bahádur Singh in the beginning of the 16th century A. D. and the names are all Tibetan and most certainly genuine. The policy of the Bárbóg Thákurs or Jos was pro-Ladáki and they therefore quarrelled with the Kulu Rájás. Mán Singh degraded Jo Bilchung but apparently left him with a *máfi*, and the family were excused all taxation and *begár*. Their castle was on the left bank of the Bhága opposite Kyélang at Kárdang which was the original capital of Láhul and stood on the old trade route.

Thákurs of Gúngrang.

The Gúngrang branch of the Thákurs of Láhul enjoy a larger *jágír* than the others and are senior to Kólong. They were founded in the 17th century by Sengge Namgyál who built a castle at Gúngrang near Kyélang. The present *jágírdár* Ratan Chand is tenth in the line from Sengge Namgyál according to the chronicle of the house. Some thirty years ago the *ex*-King of Ladák married a daughter of the Thákur of Bárbóg, and a few years ago the son of this Bárbóg lady, the present young "King of Ladák," married the younger sister of Thákur Ratan Chand of Gúngrang.

Thákurs of Kólong.

The Kólong family have a genealogy which was most probably altered after the acquisition of Láhul by Kulu to show that they were descended from Rájpúts. A list of Hindu names appears which do not tally with inscriptions on stones and other records, in which Jos of Kólong are specifically named. The Hindu names are not even translations of the Tibetan, as is usual in the Láhul chronicles. The family own Kólong which was always a strong place, well fortified, and commanding the routes from

Zangskár and Rúbchu. They submitted to the Kulu Rájás and identified themselves with their policy. The *tahsíldári* of Láhul has been in the hands of this family for over sixty years. The present Thákur Amar Chand is an active man of 32, and has given much assistance to Government since the War started. He took 112 men from Láhul to Mesopotamia in the 6th Labour Corps and held the temporary rank of Jamadár. He was given the title of Rái Bahádur in June 1917 for his services in aid of recruiting and of the administration generally. His powers in Láhul are those of an Honorary Magistrate and Munsif, 3rd class, and he also controls all executive arrangements. His brother Thákur Mangal Chand manages the forests and the attestation of mutations and *jamabandís* except those which concern his own family.

CHAP. I. Section C.

Thákurs of Kólong.

CHARACTER OF THE PEOPLE.

Character of the people.

The late Sir James Lyall thus described the character of the people of Láhul:—

"The character of the people is solid and conservative; their power of united action is considerable; they seem to me not quick-witted, but eminently shrewd and sensible. Though they show great respect to their hereditary nobles and headmen, they would, I believe, combine at once to resist tyranny or infringement of custom on their part. The headmen have certainly been hitherto very careful not to offend public opinion. Murder, theft, or violent assaults are almost unknown among them, and they seem to me to be fair, and often kind, in their dealings with each other; on the other hand, I agree with Mr. Heyde in considering the standard of sobriety and chastity among them to be exceptionally low. Drinking is a common vice in all cold countries, and the want of chastity is accounted for by the custom of polyandry, which leaves a large proportion of the women unmarried all their lives. In spite of these two frailties the Botís seem to me (like the Scotch country people, who are also subject to them) to be an eminently religious race; they seem to think that to withstand these particular temptations is to be a saint, and that in ordinary men who do not aim so high, to succumb is quite venial. The lives of their saints are full of the most austere acts of virtue and mortification of the flesh commencing from the cradle, which are certainly calculated to make the ordinary mortal abandon the task of imitation in despair; and their religion, though it fails here, has, in my opinion, considerable influence for good in their minds in other respects; more at least than the forms of religions practised by other races, Hindus or Muhammadans, have at the present day in the parts of Hindustan with which I am acquainted. This is not surprising, as the moral teaching to be found in the Buddhist books is of a very high kind. The love of one's neighbour is one of its principles, and this is extended to include even the brute creation. So, again, though good works are balanced against sins, yet their worthlessness, when not done in a humble and reverent spirit, is recognized."

The Láhula is said to have as little respect for truth as the average Kulu man, but there can be no doubt that he is far more honest, though he may be sharp, in business matters. A Láhula

CHAP. I Section C. — Character of the people.

will often pay large debts which are secured only by a verbal agreement and he will get work out of coolies where a Kulu contractor will be only cheating and quarrelling with them.

LANGUAGES.

Languages.

The Láhul languages have been investigated most deeply by the Rev. A. H. Francke. In his History of Western Tibet (pages 181 foll.) he writes somewhat as follows :—

The little country of Láhul possesses three different languages which are not Aryan and are only distantly related to Tibetan ; these languages, Bunan, Manchat, and Tinan, are the chief source of our knowledge regarding the ancient history of Láhul. It has been proved that their relationship to the Mundari languages of the aborigines of India (Bhíls, Kóls, Santáls, Juangs) is exactly the same as that of Kanáwari. As regards their vocabulary, they show a strong resemblance to Tibetan, but in point of grammar they differ widely from any Tibetan dialect, and show surprising coincidences with Mundari. There are peculiarities of numeration, a complicated system of personal pronouns, very full systems of conjugation, a strange pronominal "interfix" and half pronounced consonants at the end of words, all of which peculiarities agree solely with the Mundari and with no other set of languages. Thus philology assures us of the extraordinary fact that in very remote times (say 2000 B. C.) the amalgamation of a Tibetan tribe with the Mundaris must have taken place in Láhul and that the latter race who now number only four or five millions, some of whom live near Calcutta, must once have extended to the frontiers of Tibet.

The Tibetan element of the parentage of the present Láhulas is revealed more particularly in their vocabulary. There are a number of archaic Tibetan words which are older than classical Tibetan and are found nowhere else. In Bunan there are also words which are pronounced as in classical Tibetan, and yet a third admixture resembling modern Tibetan in pronunciation. In the same way the Manchat and Tinan languages were influenced later on by Aryan Indian languages which came from the neighbouring states of Chamba and Kulu.

Bunan is spoken in three *kothis* of Gára—Gúngrang, Bárbóg, and Kárdang : Manchat is the mother tongue of the Pattan *iláqa* and of Gushál *Kothi* in Rangloi : Tinan is that of Gondhla and Sissu, the dialect differing rather in each of these *kothis*.* Tibetan is the *lingua franca* of the whole of Láhul (though not so well understood in Pattan), but it is used as a mother tongue only in Kólong and Khóksar *kothis*. Bunan contains more Tibetan words than Tinan and Manchat.

* See map in appendix.

There is no literature in the Láhul languages beyond translations of the Bible made by the Moravian missionaries to whom we are indebted for our knowledge of these tongues and many of the customs of the people. The absence of a national literature which would have been expected from a country rich in poetical gifts and folklore is attributed by Francke to the fact that all literary activity was from the early fourteenth century concentrated at Lhása, and all the individuality of Western Tibet crushed.

RELIGIONS.

In 1868 the Rev. Heyde wrote :—

" Regarding religion the Láhulís may be divided into four classes : (1) pure Buddhists ; (2) pure Hindús ; (3) a class who profess both Buddhism and Hinduism ; (4) Lohárs and Shipís or Dágís.

" The Lohárs consider themselves of a higher caste then the Shipís, but both are said by the other Láhulís to have no religion at all ; still they have certain rites which are performed in case of sickness, burials, &c. For instance, I was present one day by the sick bed of a Lohár, and saw a Shipi profess to charm away the disease by biting off the ears and tearing to pieces with his teeth a black kid which had been previously shot with a gun. The Shipís eat beef openly, while the Lohárs do it in secret.

" Those who profess both Buddhism and Hinduism live in the villages on both banks of the Chandrabhága from *Gúru Ghantál* downwards. They maintain two or three small *gonpás* (monasteries), and abjure beef, even that of the yak. In cases of severe illness, &c., they call in *lámás* and Brahmans, who perform their respective rites at one and the same time ; their leaning is stronger towards Buddhism than Brahmanism.

" The pure Hindús are only found in a few villages on both banks of the Chandrabhága ; nearly all of them are recognized in Láhul, Kulu, &c., as a set of low Brahmans. Occasionally they will drink a cup of tea with the Buddhists and their half-brethren, but, as a rule, they refrain from eating with them.

" The pure Buddhists may be said to live in the villages on the Chandra from Khoksar to Gondhla, and on the Bhága from Gúru Ghantál up to Dárcha and Rarig. They have about eight small *gonpás* in which the chief image is that of Chám-dan-dás (=Shakya Thabba=Sangyás-Buddha), before which a *láma* daily burns incense, and places offerings of dried and fresh flowers, grain and water, and burns a lamp throughout the year. In several of these monasteries there are to be found a number of religious books. Besides Sangyás, special reverence is paid by the Láhul, Spiti, Ladák, and Tibet Buddhists in general to Avalokiteswára, called Chan-re-zig or Prágspa in Tibetan (worshipped at the temple of Triloknáth), and Pádma Pani, commonly called Lobpon in Tibetan, who is revered at the lake of Rawálsir in Mandi. Both males and females of the Buddhists make frequent pilgrimages to the temple of Triloknáth and to Rawálsir. In honour of these and other Buddhist saints they celebrate a number of annual festivals, at which a great deal of *ch'áng* (an intoxicating drink made from barley) is consumed by both *lámás* and laymen.

"All Láhuli *lámás* belong to the Drugpa sect; many of them are married and possess houses and fields, and only live part of the winter in the monasteries. Almost every house contains a small family chapel, in which Sangyás is the principal image. It is furnished also with a few books, and daily offerings of the kind already described are made.

"As already said, there are a great many benevolent spirits (*lhá*) and malevolent demons (*shrinmo* or *shrinpo*) who are supposed to dwell in trees, rocks, or on the hill tops, and before whom the Buddhists (contrary to their religion) sacrifice sheep and goats.* In addition, they believe greatly in witches, sorcerers, and the evil eye, and have a host of other superstitions in common with all the other Láhulís. The Buddhists, half Buddhists, Lohárs, and Shipís always eat up sheep or goats which chance to die from fatigue or disease; some of them eat also calves, oxen or yaks which die by a fall from rocks or otherwise, but this is done secretly. When at Kyélang a calf happens to die in the morning, it remains where it fell the whole day, no body touching it, but the dead body disappears certainly during the night. You see many bones, especially during winter, of such animals lying about near the villages, but dead asses and ponies only are left to the eagles and foxes. Slaughtering yaks during winter is still practised at Dárcha (Dártse), Rárig and other villages above Kyélang, but it is done very secretly, and nobody will acknowledge the fact. There is a small temple with the image of a *lha* near Yánamphel (Jálma). Every third year a yak is sacrificed there, the victim being supplied in turn by all the *kothís* of Láhul. This custom dates from the time of the Kúlu Rájás, who (as the god is said to be the same as that of the Dungri temple near Manáli, in Kulu) ordered that one buffalo was to be offered (as at Dungri) every third year. Since Láhul has become British territory, yaks have taken the place of buffaloes. The Shipís eat the flesh of the sacrificed yak.

"As there are in Láhul at least three religions, which have influenced each other in many ways for a long time, the manners and customs of the Láhulís are of a very varied and mixed description, and it is difficult to ascertain where many of them originated. With regard to sobriety, veracity, fidelity to the marriage tie, and in other ways, the morals, both of the Buddhists and half Buddhists of Láhul, are deplorably loose, but nevertheless they stick to their different religions with a tenacity that gives till now little hope for the spread of Christianity among them."

The vast majority of the Láhulás were returned in the census of 1910 as Hindu, probably owing to a real increase of Hinduism and the fact that the Thákurs are Hindu and the enumerators were of that religion; 7,508 were counted as Hindu, 30 Musalmán, 32 Christian and only 190 Buddhist.

There is in Pattan (Manchat) a certain ancient custom which probably goes back to old Mundari times, says the Rev. A. H. Francke in his History of Western Tibet. It is the custom of putting up a slab of stone by the roadside in commemoration of a deceased person. These may be seen near every village in Manchat, and were originally quite plain but later were smeared with oil and carved; the more elaborate

* *Shrog ma ch'ad*, *i.e.*, "Do not kill" is one of the first Buddhist commandments.

erections consist of large slabs in the temples with sculptures of more than ten persons in a row, and are well bathed in oil. Occasionally the richer members of the village combine to feast the whole village in commemoration of the dead. In Kulu, Mandi and Suket this custom is confined to royal houses probably owing to the expense which it involves. The village temples in Manchat are also probably relics of old Mundari architecture : they have sloping gabled roofs of shingles, whereas the prevailing style of house is Tibetan with a flat roof.

The most ancient religion of Láhul, says Francke, was probably phallus and snake worship. the two representing the creative powers of sun and water. The original form of phallus worship is still prevalent and differs from that of the Hindús : a raw stone of phallus shape is put up in a little grove or beside the door of a village temple and is smeared with oil or butter : whereas the Hindu phallus is well polished and sprinkled with water. There are some of the latter kind of stones in Pattan, introduced when modern Hindusim gained some ground in the country.

Popular tradition all over the country speaks of human sacrifices which were offered in order to ensure good harvests. This custom resembles strongly that which prevailed until quite recently among the Khonds of India. In Manchat human sacrifices were not offered with the same regularity as at Kyélang, but apparently only in cases of dearth.

Buddhism seems to have entered Láhul from India in the 8th century A. D. The reason for this conclusion is that the name of Padma Sambhava, the famous Buddhist Missionary of that time, is mentioned not only in connection with the most ancient Buddhist monasteries of Láhul, but even in regard to Hindu places of worship in the adjoining countries. It is of some interest that in the ancient book called *Padma bka bt'ang* the countries Zahor (Tibetan for Mandi) and Gazha (=Garzha, the local name for Láhul) are mentioned among the countries visited by Padma Sambhava; and the name Gandola * occurs among those of the monasteries founded by the same *láma*.

The ancient Buddhist temples are wooden structures with pyramidal roofs, and exhibit interesting ancient wood-carvings. Three are known : the Gandola monastery, at the confluence of the Bhága and Chandra rivers; the Kangani monastery in Manchat; and Triloknáth in Chamba-Láhul. Kangani has traces of pictures painted in blue and reddish brown colours alone, which are otherwise found only in sites of very ancient Buddhist art in Ladák and Yárkand.

*Gandola = Guru Gantál.

CHAP. I. Section C.

Religions.

When the history of Láhul became bound up with that of the Western Tibetan Empire, from the 12th century, Buddhism entered the country once again in the form of lamaism, whose many monasteries are distinguished by their flat roofs. At the same time, from the Chamba side, the influence of Aryan Hindusim made itself felt. As archæology shows, this happened in the eleventh century. The Chamba Kings brought to the people the modern phallic emblem (*lingam*), and the more refined art of stone sculpture, with which they have thereafter decorated their walls.

Triloknáth.

But whether the Láhulás inclined more towards lamaism or towards Hinduism, the temple of Triloknáth in Chamba-Láhul remained their favourite place of pilgrimage. This shrine is at the village of Tunde in Chamba-Láhul, not far from the British border, and is of *shikara* type with an older shrine in front of it. The name means "Lord of the three worlds" and is that by which the Bodhisattva Avalokiteshwara is indicated in the Chandrabhága valley and on the southern side of the mid-Himalaya in the valley of the Upper Beas. Along the lower course of the Beas river, the same name is assigned to Shiva, represented either as a *linga* or as a five-faced statue, which in its attributes shows a marked resemblance to some of Avalokita's images. The worship occurs at Tunde, and in Mandi town; at Kalath, in the temple of Kapilamuni; at Rewálsir in Mandi, as Padma Sambháva, and at Trilokpur near Kotla in Kángra. There is no doubt that the worship of Triloknáth at Tunde is essentially that of Shiva, though the temple is staffed by Buddhist priests, and the god has been adopted by the lámas. The name of the shrine in Tibetan is *Repags*, and of the god *Pagspa*= the sublime, the exalted one, or *Chan-re-zig*=the all-seeing Lord (spelt *spyan-ras-gzigs*). He is the begetter, redeemer, and ruler of men, the great Lord of pity and mercy of whom the Dalai *lamás* of Lhása claim to be the incarnation. As such *Chan-re-zig* may be called the "vicar-general" of the great Buddha (Sakyamuni) here on earth, whilst Buddha himself, having attained *nirvána* is absent. *Chan-re-zig* represents, in short, "Providence" to the people. The temple is visited by crowds of Láhulás at the end of August, and the meeting lasts for two days. It is essentially a religious gathering, and no trading is done. The oracle is consulted and public worship and offerings are made, with sacrifices and much drinking. Two men act as a medium for the oracle's orders. The attendance consists of 800 or more persons from all over Láhul, Spiti, Zangskár, Ladák, Kulu, and even the plains, as well as Chamba people. Women visit the shrine regularly, and particularly after deaths have occurred in the family.

FOLKLORE AND LEGENDS.

CHAP. I. Section C. Folklore and legends.

There is much material to be investigated in connection with folklore, superstitions and legends. There are, however, very few written records. The Rev. Francke has put into print the following :—

(1) The legend of the introduction of corn grains and of the Gárás (blacksmiths) into Láhul from the plains:

(2) The legend of the flight of the god of Márbal (Pattan):

(3) The legend of how the Nágas supplied the village of Tinan (Gondhla) with springs :

(4) The story of the last human sacrifices at—

(1) Bar, in Gúngrang.

(2) Kyélang.

(3) Gus (Gushál) and the death of the Queen Rúpi Rám :

(5) The legend of the founding of the village of Chod in Pattan by Brahmans from Bandal in Saráj :

(6) The story of the expulsion of the Ladákís from Spiti probably after the *battle* of Basgo about 1647 A. D.) :

(7) Negotiations lasting up to 1843 conducted by the Kings of Ladák and Kulu :

(8) A song describing the death of *Shem-ch'ung* Parmoli. the daughter of Jo Bali Rám, about 1840 :

(9) A hymn to be sung over the fire on the snow at the winter solstice :

(10) Two different hymns sung by the Láhulás of Stod (upper Bhága valley) at the winter solstice :

(11) Five short prayer-songs :

(12) A song of the minstrels Rokunu and Debanu, sung before the Rána of Gus :

(13) A song describing the manufacture of an idol for Rája Tedhi Singh of Kulu by a blacksmith of Manchat (Pattan).

Religious ceremonies connected with agriculture.

The Láhulás observe certain ceremonies of a religious nature in connection with the cultivation of their fields. A *láma*, who understands the astrological books, names the auspicious day in which ploughing should be commenced (this day falls always between the 8th and 22nd of May). After the fields have been ploughed and sown, a procession goes round all the fields, preced-

CHAP. I. Section C.

Religious ceremonies connected with agriculture.

ed by one or two *lámás* and two drums, some of the company carrying at the same time several large religious books on their backs ; this done, the whole company sits down in the field near the villages, and feasts on cakes and *ch'áng* supplied jointly by all the landholders. All this is done to secure the sprouting up of the seeds sown ; after that the water-course for irrigating the fields is repaired, on which occasion a sheep is offered up to the *lha* which is supposed to have special care of the water-course. Again, as soon as the seeds have sprouted, another ceremony is performed ; this consists in sticking small branches of the pencil cedar here and there in the field, and burning them as incense, while some members of the family sit down, eat and drink a little, and murmur some prayers. This is to ensure that each grain which has sprung up may prosper and produce many ears. When the fields are nearly ripe, a goat or sheep is killed in honour of the *lha :* in several villages horse-races are held at the same time. Till this festival of the ripening grain has been celebrated no body is allowed to cut grass or any green thing with a sickle made of iron, as in such case the field-god would become angry and send frost to destroy or injure the harvest. If, therefore, a Láhula wants grass before the harvest sacrifice, he must cut it with a sickle made of the horn of an ox or sheep, or tear it off with the hand. Infractions of this rule were formerly severely punished ; at present a fine of one or two rupees suffices, which is spent on *ch'áng* consumed by the villagers assembled in council. The iron sickle is used as soon as the harvest has been declared to be commenced by the performance of the sacrifice.

Monasteries.

The largest and most noted monastery in Láhul is that of Guru Ghantál or Gandola which stands on a mountain above the point of confluence of the Chandra and Bhága rivers. The number of regular monks attached to it is small, and most of them belong by birth to Ladák or other foreign countries. A tribute of the value of Rs. 30, half in cash and half in goods, is sent every year by the abbot to the abbot of the Stagna monastery in Ladák, who forwards it with other tribute on his own account to that of Kángri Donján, near the Mansarowar lake in Chinese Tibet, whence it goes in the same way to the monastery of Pangtang Dechinling in Bhután (*alias* Lo), the abbot of which bears the title of Nawang Námgyál. This dignitary seems, as head of the mother monastery, to be *ex-officio* the head of the order to which all of them belong, for the other abbots were all appointed by an order given in his name, and relieved in the same way at the expiry of their term of office ; the chain of affiliation by which the different monasteries were connected seems to be traceable to the history of their gradual foundation by missionaries sent out from each centre. But the fact of Ladák having come into the

dominion of a Hindu prince (the Mahárája of Kashmír) appears to have weakened the authority of the Nawang Namgyál, for of late years a mere deputy of the Zangskar abbot has acted as head of the Gúru Ghantál monastery. All the landholders of Láhul, excepting a few Brahmans, pay a fee of Re. 1 or so to this monastery on the death of a member of the household.

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In the autumn the *nyérpa* or treasurer, with some of the monastery tenants in attendance, goes through the whole country, and collects from every holding a customary fee called *dubrié*, consisting of one *dré* full (2 lbs.) of barley. In the spring a great festival takes place, known as the Ghantál Tsátsa, at which all Jos and *lámás* are fed for one day. A long train of pilgrims may be seen engaged in making the circle on foot of the holy mountain, the Drilburi—a work of much religious efficacy, as it ought to be, seeing that it involves a trudge of about eighteen miles and an ascent and descent of several thousand feet. The late Sir James Lyall wrote:—

"The third grand *láma* of Tibet visited Láhul while I was there in 1867, inspecting the monasteries and giving his benediction to the people at places where he halted. He travelled in quaintly shaped, bright-coloured tents carried on yaks, with a considerable retinue of monks. I saw him seated on a throne or platform built up in the open air, dressed in a mitre and silken canonicals, extraordinarily like those worn by Roman Catholic prelates. The monks formed a lane in front of the throne, up which the Láhulís advanced in the most reverential manner to receive the blessing, and a bit of silk to be worn, I believe, as a talisman. After backing out of the presence, they made the circle of the throne, praying aloud as they walked. I saw one poor man present a pony, so the value of the offerings must have been considerable."

There is another monastery, the Shá Shúr *gonpa*, above the village of Kyélang at which a sort of miracle play is enacted annually by the *lámás* in the month of June. The performers wear rich dresses of Chinese silk, and the orchestra of drums and cymbals is led by the abbot of the monastery clad in his robes and mitre. The acting consists entirely of pantomime and dancing, except that a chorus is occasionally chanted. The solemnity of the proceedings is relieved by the action of a clown who appears now on the stage (an open space in front of the monastery) and now among the audience performing buffoon tricks and pursuing obstreporous small boys. The victim of the numerous pranks played by devils and others in this ceremony is the King Langdarma of Central Tibet who was the arch enemy of Buddhism.

THE MORAVIAN MISSION.

The Moravian Church.

The Unitas Fratrum, known as the Moravian Church, is remarkable for its Missionary endeavour. It began life in 1457 A. D. and passed through a period of persecution in Bohemia before

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The Moravian Church.

it migrated to Saxony: it is a small church, but the congregations of the Mission fields number three times as much as those at home, and every member takes some part in Mission work. The fields are in remote places, including Labrador, Central America, South Africa, and Central Asia, with a leper asylum at Jerusalem. The tenets of the Church are Evangelistic Protestant, the orders are Episcopal, the Government is by representative Synods and elected Boards. There are three Provinces in (*i*) Great Britain and Ireland, (*ii*) The United States of America, with Canada, and (*iii*) Germany, with several continental countries. The general Synod meeting every ten years controls the policy and funds of the Church as a whole, and appoints a Board to control the Missions, which is composed of an elected Bishop from each Province and a Finance Member. Each Province has its own legislative Synod and Executive. There is no Bishop in the Central Asian Mission field, which is financed from England. The Secretary of the Mission Board in Saxony is an Englishman and the Pastors in Central Asia are now either English, naturalized British, or Swiss. They are paid very small salaries and credit all revenue (*e.g.*, from trade or farming) to the funds of the Mission: and at Kyélang, they live cut off for many months together from the outside world.

The Moravian Mission in Láhul.

The Central Asian stations are at Leh and Khálátse in Ladák, at Poo in Bashahr, and at Kyélang in Láhul. These fields were opened after attempts to settle in Tibet had been frustrated by the Russian and Chinese Governments. Kyélang was the first station, and thither in 1854 came Pastors Heyde, Pagel, and Yäschke. Pastor Pagel was transferred to Poo shortly afterwards, and after a few years, Pastor Yäschke, who was a good linguist, went to Saxony to continue his labours. Pastor Francke was stationed chiefly at Leh (opened in 1890), and his work as historian and writer of folklore stands out above that of any other student of Western Tibet. Pastor Heyde remained at Kyélang for half a century, continuously, and only returned to Germany to spend the last two years of his life. His record is one of absolute devotion to the work of the Mission: he and his wife have left lasting effects of their life and labours among the people of Láhul as have a succession of other Missionaries. Pastor Schnabel and his wife were at Kyélang for about ten years, and in the autumn of 1915 were repatriated to Germany. With Pastor Francke, who was also repatriated, has gone an invaluable history of Láhul and much information regarding folklore, which is perhaps lost for good.

The Láhul Mission congregation consists of 21 adults and 27 children: there are 15 accredited communicants. The Mission

has a bungalow, school and dispensary at Kyélang and a branch school at Chot in Pattan. The work done by the Moravians is very valuable: they have assisted investigation into folklore, language, customs and religion: they have introduced the Christian religion and made some converts: their example and assistance on all necessary occasions has been most beneficial to the people at large. Their efforts at education have not prospered as they would have done but for the passive or active opposition of the local *lámás*, and much difficulty is experienced in obtaining students in the summer and even in the winter. This is not because the schools are Christian: the efforts of Government have also been unsuccessful, though at present there is some demand for a good primary school. The *lámás* impart a certain kind of education in their monasteries which they think is sufficient and it certainly has elevated the Láhulás above the people of Kulu in point of intelligence and literacy, but the *lámás'* education is not good enough for modern times and this is apparently being realised by the leading men in Láhul now. The schools at Kyélang and Chot educate chiefly Christians: the Kyélang school was established in 1861 after overcoming much opposition and in 1862 branch schools were opened under *lámás* in seven villages. but were closed owing to the unreliabilty of the *lámás*. In the last winter, for which figures are available, the Kyélang school was attended by 17 boys and 2 girls. Knitting classes are held for women and girls in the winter with satisfactory results, and there is much promise in this branch of the work. In Mauchat (Pattan) there were schools opened at Gushál and Shánsha, but they were soon closed. The Chot school had 16 boys and 4 girls in the winter of 1914-15.

Moravian Mission in Láhul.

The printing press at Kyélang has not been used of late except for a reprint of some Tibetan school books in 1904 and Tibetan Census Forms in 1910. It had, however, done much valuable work. Among other publications the following have been listed by the present Pastor Kunick: Gospels, Epistles, Hymn book, Pentateuch, Books of Samuel, Literature of Christian Evidence, tracts, school books, Tibetan Primer and Reader, Geographical Reader, Arithmetic, Tibetan letterwriter, Instructor in English for Tibetans, Instructor in English, Tibetan, and Urdu in one book, Tibetan Dictionary and Grammar, repeated issues of Census forms in Tibetan for use in Láhul and Spiti: the Gospel of St. Mark in Bunan, Tinan, and Manchat dialects, a Gospel Harmony of the life of Christ in colloquial Ladáki, a compilation of folklore in the three Láhul dialects, and a second collection of Tibetan Historical Inscriptions on rock and stone from Western Tibet.

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The Moravian Mission in Láhul.

The daily attendance at the dispensary is about 10, but it has fallen off since the people have been asked to contribute an anna or two for the medicines. The pastor in charge is not medically trained but has been through a short course in medicine.

The mission introduced potatoes, oats and rye on their farm: the rye is cultivated by the people chiefly for the sake of the straw, but oats have disappeared: potatoes have become widespread. The Lombardy poplar was also brought in by the Moravians and is doing very well.

The mission keeps statistics of rain and snowfall at Kyólang for the Meteorological Department.

OCCUPATIONS.

Occupations.

The Láhula does not stay at home except to cultivate his crops and a large proportion of the population is absent whatever time of the year is considered. Hundreds of men go in July to Western Tibet where they pay cash for wool and *pashm* and despatch it to Láhul on their own sheep, and the latter are then sent back to Tibet for the winter grazing. Others traffic at the Patseo fair which goes on for a month in August and buy salt, wool and *pashm* and take it down to Kulu. There is much less money made nowadays by carrying goods for hire, as the rates have gone down, and the Kashmír route is more convenient than the difficult road through the south of Ladák. Many Láhulás, however, take their sheep to the lower Hill States for the winter. Others work in forests, in Kishtwár, Chamba and Kulu, either as sub-contractors or as coolies. The number of Láhulás who go further afield in India for trade is unknown, but is believed to be increasing. The trade of *lugri*-brewing in Kulu and Kángra is on the decline owing to the reduction in the number of shops in Kulu. Nearly all Láhulás can knit stockings, and weaving is done in almost every home. The cloth is however very narrow and the wider and better stuff is all woven by immigrants from Upper Bashahr and Kanáwar. *Karru* (gentian), *patis* (aconite) and other roots are dug in the waste lands and profitably sold in Kulu.

FOOD.

Food.

The daily meals are usually three in number. Early in the morning pancakes made from buckwheat flour are eaten, and at midday porridge of barley flour mixed with dried buckwheat leaves. The evening meal consists of buckwheat cakes eaten with meat or soup when procurable or with curds. Wheat flour sometimes takes the place of buckwheat, and also

on high occasions, such as New Year and marriages, wheat is employed for the manufacture of beer (*oh'ány*), the ferment used being called *pháp*. Another sort of *oh'áng* is brewed from rice and barley, and a kind of whisky is also distilled from barley which is drunk in its rawest form, and is never allowed time to mature. Cattle are not slaughtered nowadays except perhaps in some villages at the head of the Bhága valley; but five or six sheep are killed in each house at the beginning of the winter; the flesh dries, and will then keep good for any number of years; the older the meat, the greater the delicacy to the taste of a Láhula. All the people of Láhul will eat sheep that have died a natural death; and Dágís will eat dead cows and bullocks; but it is said that the Hésís will not. Vegetables are now cultivated almost everywhere in Láhul, with the exception of Khóksar where it is too cold for them. Potatoes are now grown in considerable quantity.

DRESS.

The dress of the men is much the same as that worn in Kulu, the only difference being that the coat is longer and of thicker and darker cloth, and that trousers are always worn; they carry few or no ornaments. The women wear long robes or coats with sleeves, made of a thick, dark-brown woollen stuff and generally trousers or thick gaiters as well. The robe is secured at the waist with a sash or girdle (*skyérag*), from the back of which depend two strings of brass beads (*phólontsi*) with small brass bells attached to the ends of them (*królótsi*). These strings of brass beads are plaited into the hair and pass under the girdle, and just above the latter a square piece of shell (*dúngkri*) is fastened into the hair. The *dúngkri* of rich women may be made of silver or mother-of-pearl. The women generally go bareheaded. A few plaits of hair are separately collected at the centre of the top of the head, to fasten down a saucer-shaped silver ornament (*kyir-kyirts*) which sometimes has a turquoise set in the middle of it. Another ornament is the *poshel*, a round piece of amber, up to 1½ inches in diameter and fastened into the front of the hair over the temples. Bracelets (*nángtsi*) are also worn, made of silver, brass, or pewter. The ears are over-loaded with large silver rings, and necklaces are also worn, but the display of ornaments is very much less than in Kulu. Instead of the *kyir-kyirts* a few women in the higher villages wear the *bérag* or crimson cloth pigtail, studded with turquoises which is the distinctive head-dress of married women in Spiti and Ladák. It is not easy at first to distinguish a Láhuli nun, if young, from a lad, as they shave their heads and dress like men.

DWELLINGS.

CHAP. I. Section C.

Dwellings.

The houses in Láhul are very different in appearance from those of Kulu or Kángra; they are two and sometimes three storeys high with flat roofs; the lower storey is occupied by the cattle, horses, sheep and goats; the upper one contains the rooms lived in by the family.

The roofs are composed of rafters laid rather close together. Across these juniper or pine is laid, of any length obtainable and split up in thicknesses of 3 or 4 inches, the pieces touching each other and put on loose: birch is also used. These are covered with a thick layer of reed grass, with another thick layer of earth on top. The roof is edged with flat stones which keep out the weather very well. All roofs are cleared of snow immediately after every fall in the winter.

Ordinarily the upper storey consists of an interior or winter room, an outer or summer room, and a verandah room open on the fourth side. In this verandah stands the loom; inside will be found large corn-chests made of slate set in wooden frames, large stone bowls from Skárdo in Ladák, iron cauldrons, and cooking pots, an iron tripod or pot stand, some wooden dishes, and a few earthen pots, from Kulu. Many pack-saddles for sheep and goats are strewed about, and a few blankets and thick sheep-skin coats hang on the walls. Small holes in the walls serve the purpose both of windows and chimneys, and window-panes are sometimes seen at Kyélang: many houses have bed-steads, but they are very roughly made. Grass is stacked on the roof, and wood for fuel inside. This is a fair description of a house in the upper valleys of Láhul; in the lower villages the rooms are larger and better ventilated. In Gára many of the houses are built together in one block with connecting passages, by which communication is kept up in the winter without going out, which, when the snow is very deep, is often scarcely possible.

FUNERAL CUSTOMS.

Funeral customs.

Corpses are usually burnt, and the ashes thrown into a river, or made into a figure of the deceased, and deposited in a *ch'odten* or high cenotaph in the case of the richer people. The stones (*pathar*) put up to commemorate the dead in Pattan are described in the section on Religion. These are sometimes kept in a building near the village called a *marhi*, and travellers are allowed to stay there. The stones bear rude carvings and some of the more ancient ones depict Láhulás with a dress consisting only of a kilt, while the chiefs have feathers on their heads like Red Indians. These were apparently aboriginal inhabitants of India, called Mundárís.

Funeral customs.

The corpse of a Kanet or other higher caste person is not touched until the head *lámá* has been called. He shakes the tuft of hair, always grown on the head, and says *p'ad*, thus enabling the soul to escape the body. This ceremony is called *p'oa gyábche*, and the *lámá* receives a rupee for it. *P'oa* means "stomach" and the idea is that the soul dwells in that part of the body. Poor people cremate the body as soon as possible and throw the ashes into the stream nearest the village. In the case of the richer people, the cremation is delayed as long as possible and the ashes are taken to the confluence of the Chandra and Bhága rivers at Tándi (Tángti). Poor persons make a collection of wood for cremation from every house in the village. In the case of well-to-do people, the body is quickly washed, and dressed in silk attire (kept for mask-dances at the *gónpás*) and placed in a sitting posture on an iron tripod, used for standing pots. A light called *ch'odmé* is kept burning day and night in front of it and the *lámás* read their *ch'os*, or religious texts, near by, going home at nights, while a strict vigil is kept over the body. When finally taken for cremation, the body is put on a bier, wrapped up in red stuff and covered with the best clothes of the deceased, and also her ornaments in the case of a woman. These are removed at the cremation ground and taken back to the house. Many people follow the procession, headed by a band of Gárás (blacksmiths) and another of *lámás*. Some time is taken in reaching the pyre, as every now and then the procession stops, the bier is put on the ground, and the Gárás and carriers then walk round it, and are paid an anna or two each time this is done, until the sum allotted for the purpose is spent. Arrived at the burning-ghât, the cremation takes place after much reading of texts and offering of butter by the *lámás*, and amid the drumming of the Gárás. The kettledrums used are the property of the village. Next morning the ground is again visited and drums beaten and the four carriers of the bier collect the remains and bring them to the *láma*, who puts them into a bag, and dresses it up gorgeously as an effigy of the deceased, with all the ornaments on it in the case of a woman, and places it before the idols. It is kept there from four to seven days and during the whole of that period the *lámás* keep on reading from early morning to late at night, at the house of the deceased, for the benefit of his soul. On a propitious day, determined by the *lámás*, the effigy is put on a pony and with somebody holding an umbrella over it, it is taken to the confluence of the rivers at Tándi, the Gárá band accompanying the party. The officiating *láma* reads his *ch'os*, and as he reads throws the ashes into the river, a handful at a time. On the 48th day after the death, the richer folk give away *gewa*, or alms for the benefit of the departed soul. This

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Funeral customs.

is given to every house in the neighbourhood, and consists of a big ball of boiled rice, or of barley-meal dough, a large wheaten cake, and some *ch'áng*. Lesser folk give *stónmo* or alms on a smaller scale to all who come to ask for it: this gift consists of two wheaten cakes fried in mustard oil. Poor people give a rupee or two to the local *gónpa*. After every death, at any convenient time, an offering is made to the god Triloknáth; this is always of butter, as much as 16 seers being given by richer folk. The *lámás* are well fed during the funeral days and receive a complete dress of the deceased for their service.

The Shipís perform their own funeral rites, but the Gárás have to call in a Shipi. Of late years, it has become customary for Gárás to call in a *láma* to read *ch'os*. When the Shipi arrives, he places the corpse outside the house and pours milk all round it on the ground: then he leads a cow round the body three times, first from left to right and then from right to left. He repeats these movements with a lamb in his left arm and a kettle-drum over his right shoulder, drumming all the time. Drums are then beaten till the cremation takes place. The body is wrapped in white or red stuff, and carried on a bier to the river near the village. The ceremony is then like that of the higher caste people. On returning to the village, the Shipi kills the lamb, previously carried round the corpse, and sprinkles the blood round the walls of the house. He is given the old clothes, cap, waist-band, and shoes worn by the deceased. The Gárás give away *gewa* to their own kindred, at a banquet, just as the "Kanets" do.

Custom of cheating death.

Where medicine and sorcery have evidently failed and the death of some beloved person appears inevitable, a sham funeral is sometimes arranged in order to deceive the angel of death. A complete life-size effigy of a small youth is made on a wooden frame, plastered round with dough of barley-meal. This is painted and dressed up with the clothes and ornaments of the sick person, so as to present as close a likeness as possible. After much reading of the *ch'os* by the *lámás*, and after firing guns and letting off fire-works, a funeral procession headed by the Gárá and *láma* bands is formed, at night-time, and the effigy is solemnly burned, after being first cut to pieces. The clothes and ornaments go to the *lámás*. Meanwhile, a man engaged for the purpose bewails the death of the person who is lying sick, and crying out the name, shouts again and again that he (or she) has been dead now for nine years. For this he is given the straw shoes (*búla*) of the effigy. Sometimes, we are told, the trick answers: sometimes not: and in the latter case there are two funerals, a sham one followed by a real one, both very expensive.

AMUSEMENTS.

Horse-racing and shooting with the long bow are amusements common to both Láhul and Spiti, and are practised at meetings held at particular seasons. Prizes are given at the races, and the rider of the last horse is subjected to a good deal of ridicule and practical joking. The target at an archery meeting consists generally of a pillar of snow with a leaf for a bull's eye. The archers excite themselves by treating the pillar as an effigy of some traditional tyrant, and cry out* "let the Rána of Ghushál have it in the goitre" or "give the Kárdang Rána one in the heart." Stakes of cash or grain are shot for. Both Spiti men and Láhulás have almost always got dice about them, with which they amuse themselves by gambling at odd moments. Evening parties are common enough, at which much *ch'áng* or beer is drunk, and men and women dance a kind of quadrille† or country dance together in a very brisk and lively fashion to the music of flageolets and tambourines played by the *Bedás*.

* "*Gusipha Báne bába la.*"
"*Kárdang Ráne shosha la.*"

† The women's dance is called *shemi*, the men's dance is known as *garphi*.

CHAPTER II—Economic.

SECTION A.

Agriculture.

Cultivated area.

The cultivated area according to the records drawn up at the last revision of settlement in 1912 measures 2,871 acres of fields and 3,312 acres of meadow land, representing in all some ·5 per cent. of the total area of the *wazíri*. The quality of the land and its produce is wonderfully homogeneous throughout the tract, and harvests are secure except in a few hamlets where water is scarce. The nature of the soil varies little, and it may be described as a light, sandy loam, singularly free, as a rule, from stones, but dotted over in some places with large boulders : the soil is very fertile. The higher hamlets, however, have a bleak and squalid appearance, which is only relieved by a near view of the brightly coloured meadows and sloping fields of barley. To these high hamlets some of the lower riverside villages offer a striking contrast : here are long thickets of carefully tended willows, groves of apricot and poplar, and broad flat fields of corn.

System of cultivation.

Rainfall being so light during the whole of the growing season, no results are obtained without irrigation. The water is either led on to terraced fields or spilt down the hillside to make hay meadows. Water is obtainable in abundance from the snow and glacier-fed torrents which pour into the main rivers. There are, however, in some places signs that the water-supply must be carefully conserved if it is to be sufficient for the land commanded by it. There is often much escape of water, either back into the nullah or underground, and the people have not yet learnt to pave the beds of the water-courses (*yur*) with the slates which they can procure at very little cost. The large rivers flow too deep down and with too much current to be available for irrigation.

Harvest operations.

Snow lies over the whole of Láhul from December generally till the end of April, and during that time no agricultural work is possible. Sometimes in the higher villages after a late winter the snow has to be melted off the fields by throwing earth over it to allow of the land being ploughed up and the seed put in. When the seed has been sown a watering is necessary once a fortnight, and is given once a week if water can be obtained. Ploughing and sowing operations are necessarily begun later in the upper portions of the Chandra and Bhága valleys where the snow lies longer than in the rest of Láhul, and the crops consequently ripen later, and are liable to be injured by an early fall of snow

such as frequently accompanies in those parts of the *wasíri* the final stoppage of the monsoon rains in the Punjab. In the lower villages of the Pattan valley an early barley crop is reaped in July and it is possible to follow it with a second crop of buckwheat which ripens towards the end of September. Elsewhere harvest work begins with the mowing of the hay in the beginning of August in the lower villages, and as late as the middle of September in the higher ones; and the buckwheat, barley, and wheat are reaped in succession. The straw is much valued by the people; the buckwheat is pulled up by the roots, and the wheat and barley are cut as close to the ground as possible. The corn is tied into sheaves, and stacked in much the same way as in England, and threshed in the fields on floors made by moistening a plot of ground and stamping the earth hard. Donkeys are sometimes used for treading out the corn. The harvest is in by the end of September in the greater part of Láhul, or by the middle of October in the upper parts of Ránglo and in Stod.

Harvest operations.

Agricultural implements.

The plough (*shul*) at Kyélang has a wide and heavy head, shaped like a half moon, and set in a socket at the front of the plough: the head is flat and not saddle-backed, as in Spiti. It measures 11″ wide and 8″ long and it does not point downwards. The body of the plough is a straight piece of birch wood into which is set the pole and a vertical post with a handle forming the tail of the plough. The handle is less than two feet from the ground and entails much stooping. The pole is not always set in a line with the body of the plough and the pull is not directly on the latter. The Gondhla plough (*bhot-shul* or "Tibetan plough") resembles more closely that of Spiti. The head is not so wide as the Kyélang plough-head, nor so long, measuring 9½″ wide and 4″ long. The head is saddle-backed and points downwards. The body of the plough has a bevel on each side which makes it come to a sharp ridge at the top, and this formation is useful for casting the earth aside. The body is in one piece with the handle which is set slightly higher than at Kyélang, but still very low. The natural bend of the base of the birch tree, caused by the weight of snow on it in its early stages, makes it suitable for this form of plough; but the angle formed by the tail and the body of the plough is much wider than in Spiti. A light stay joins the tail and the pole. Willow wood is used for the stay and the pole and the yoke, as in Spiti. The Gondhla plough has a better direct pull than that used at Kyélang. A harrow of willow wattle is used in Láhul, with wooden teeth, and is a handy cheap instrument, fairly effective. There are however no spades or rakes, or bullock-shovels, and the levelling of the fields is sometimes very indifferent. An iron bill-hook or *dáchi* about 1 foot 2 inches long is used for cutting thorns, as well as

CHAP. II. Section A.

Agricultural implements.

the *jatum*, or sickle of iron, with a wooden handle. There are two kinds of pick, one light for weeding and leading water about and the other a heavier one for general work. There is not a very liberal supply of agricultural tools and frequently there is only one plough to a hamlet of several houses, the inhabitants of which use it in turns.

Sowing, weeding, etc.

Sowing is done broadcast, and a liberal amount of seed is used; weeding is done by the women, who often fail to do it very thoroughly. The principal weed in the corn is a kind of crow's foot (*khyín*) which has very long roots: black smut (*yákág*) is also a disease met with. In the meadows no weeding is done, and though they look gay with all kinds of flowers there can be no doubt that a little trouble taken to prevent the more luxuriant kind of weed from flowering would considerably improve the value of the hay. The chief meadow weeds are (1) a tall white-flowering plant, with small petals called at Kyélang *múshútsi* and at Gondhla *kháyan*, (2) a blue or purple flower, called *tágshráng* at Gondhla; and (3) bracken. The borders of fields are also frequently full of strong-growing weeds which spread into the corn very quickly.

Rotation of crops.

The usual rotation of crops is barley the first year, buckwheat the second and wheat the third. But whether this rotation is followed depends very much on the quantity of manure at the cultivator's disposal. Ordinarily he has only sufficient to manure one-third of his land thoroughly once a year. In that portion he sows barley, which requires much manure: and in the following year the land remains rich enough to yield a crop of buckwheat without receiving additional manure, while a top-dressing is sufficient for the wheat crop in the third year. The remaining two-thirds of the land are similarly treated in succession. But wheat is little valued, and as much land as possible is put under barley, as is shown by the following figures, which give the percentage borne by the area under different crops to the total cultivated area:—

Wheat ...	...	18·6 per cent.
Barley ...	..	47·6 „
Peas ...	...	·6 „
Sarson and other crops	...	·4 „
Buckwheat ...	...	37·3 „

Similarly, even in the villages where the low elevation and favourable aspect allow of a double crop of barley, followed by buckwheat, to be taken in the same year, only a portion of the land can be so cropped, owing to insufficiency of manure, and it is usual to sow wheat in the field in which the year before a

double harvest has been reaped. The area in which both barley and buckwheat are sown is usually under 200 acres, situated comparatively low-down on the banks of the Chandrabhága. There are no fallows and all the cultivated area is sown every year. The country cannot support very many cattle, owing to the lack of grazing suitable for cattle, and manure is not procurable in the shape of rotten vegetation from the forests: both circumstances are due to the light character of the rainfall.

CHAP. II. Section A. Rotation of crops.

There is no class of landless agricultural labourers: the men do the ploughing before they leave the country for trading and the women manage the fields till harvest time.

Agricultural labourers.

The chief crops are barley, buckwheat and wheat. There are three kinds of barley, all apparently peculiar to Láhul, and of excellent quality. A bushel of Láhul barley is of the same weight as a bushel of wheat. The three kinds are locally known as *sérmo*, *dzád*, and *thángdzád*. The first-named is the best, and is remarkable for its compact ear with the grains arranged in four rows, instead of three as in ordinary barley. *Thángdzád* is considered inferior to *dzád*, but does not differ from it in appearance, and derives its name (*tháng*=plain, *dzád*=barley) from being sown only in Pattan. It ripens quickly as has been mentioned above, is reaped towards the end of July, and is followed by a second crop of buckwheat.

Principal crops—Barley.

Buckwheat sown in succession to barley is known as *bosátar*; that sown as a first and only crop being called *káthu*, *bhrésa*, or *brapo*: but they appear to be the same species and variety—*fagopyrum esculentum*—though the yield from the former is inferior, and, ripening late, it is liable to be nipped by frost. The grain is said to be better and less bitter than that of Kulu.

Buckwheat.

The wheat does not differ materially from that grown elsewhere in the Punjab, but is of excellent quality.

Wheat.

Peas, closely resembling the kind grown in vegetable gardens, are very generally grown in the Chandrabhága valley and potatoes throughout Láhul. Potatoes were introduced by the Moravian missionaries, and are now much valued by the people. The Mission also brought in oats and for a time made their own oatmeal, but the value of this grain was not realised by the people and its cultivation was discontinued owing to their objection to the oats spreading into their crops. Similarly the Mission introduced rye, but the only use the people can find for it is for making sandals from the straw; rye continues to exist on sufferance owing to this quality. Small plots near houses are sown with tobacco and *sarson* in Pattan, and with *bháng* (for fibre) and vegetables nearly everywhere. The tobacco is inferior,

Other crops.

CHAP. II. Section A — Other crops.

and remains green when dried. In places *sarson* is sown (for the oil) in succession to barley: maize and millet were sown experimentally in 1890 but failed.

Hay.

The cultivation of the grass for hay is a remarkable point in the agriculture of Láhul. A large quantity of fodder is required to support the farm stock during the winter months when all the pasture land is under snow, and it has been noted above how carefully straw is cut and stored. During the winter a man's load of hay sells for a rupee. On the dry mountain slopes no grass grows, and the grass of the sheep-runs on the ridges is not suitable for hay-making. Each cultivator therefore keeps a portion of his land under grass, generally steeply sloping stony ground unsuitable for the production of cereals. Such hay fields are known as *dáng*. The sloping banks (*piri*) between the terraced fields are also cropped with hay. When water is let on to such lands a spontaneous growth of various kinds of grass and herbs springs up. A lucerne-like plant with a yellow flower, called *chúnpa*, has been introduced into the hay fields and is much valued; its seed is said to have been brought from Ladák, and the plant is also cultivated in Yárkand. Hay-making as has been noted above precedes the other harvesting operations. As a rule, a cultivator has as much land under grass as under cereals.

Average yield of crops.

The outturn of the three staple crops is greater than the yield of the same crops in any other part of the district. Apparently, too, in many hamlets considerably more seed is sown in proportion to area than in other parts of the sub-division. The reason given is that the water-supply is irregular and a deficiency results in speedy damage to the crops. But this disadvantage cannot be common to all the hamlets. In 1912 some experiments were made to ascertain the yield of barley and wheat and the following rates of yield were admitted to be fair and were assumed for assessment purposes:—

Barley	...	...	400 seers per acre.
Wheat	...	...	370 " " "
Buckwheat	...	...	300 " " "

The outturn of peas was estimated at 200 seers, or a little more than the yield assumed for Spiti: the whole crop is only 19 acres. *Sarson* and tobacco are not grown for sale, but in minute patches for home use. Potatoes are seldom a source of profit, and when sold their price is no more than in Kulu: the crop was valued at Rs. 10 per acre.

Extension of cultivation.

In the Bhága and Chandra valleys the recorded area of cultivated fields was in 1912 less than it was in 1891 by 113 and

88 acres, respectively, and in Pattan it was more by 129 acres. The decrease was nominal and due to new mapping and calculation of areas. Much of the increase in Pattan was also nominal. The land broken up for cultivation between 1891 and 1912 actually measured 132 acres, of which 35 acres were in Gára, 26 in Rangloi, and 71 in Pattan.

Extension of cultivation.

While agriculture in Láhul exhibits no change since the country was first assessed to revenue under the British Government there has been an advance in the direction of arboriculture. The country is much better filled with poplar and willow trees than formerly, and a considerable amount of fruit is grown at Kyélang, principally apples and plums. For a fuller description of the trees of Láhul, see Chap. II, section C, below.

Arboriculture

There is no tendency to take loans from Government, owing perhaps to the remoteness of the tract. Much could be done to improve the water-supply for agricultural purposes by a judicious distribution of loans, if the people would take them. Money has been collected for a co-operative bank, but none has been formed yet. There is probably a good opening for a Láhul bank to finance trade as well as agriculture. The distance from the Punjab, however, is inimical to that frequent and regular inspection which is one of the essential features of the co-operative credit system.

Countryside finance.

Prices paid for small patches of irrigated land in Láhul have always been remarkably high. Since 1891, 9 per cent. of the cultivated area had been sold in 1912, at an average price of Rs. 157 per acre. Out of the 548 acres sold, however, only 18 went to money-lenders. The recorded prices almost always include an accumulation of interest on debts incurred for trading ventures. The proportion of the cultivated land mortgaged in 1912 (2·22 per cent.) was smaller than the figure of 1890 (3·43 per cent.), and the average mortgage price (Rs. 97 per acre) is rather lower than it used to be. Most of the existing mortgages are of old standing, and some date from a time when fortunes were made and lost by speculation in sapphires, a pocket of which was discovered in Kashmír, thirty-five years ago. The creditors are usually agriculturists.

Alienation of land.

Interest.

The usual rate of interest is said to be as low as 12 per cent. This leaves little scope for co-operative credit, without a considerable influx of local deposits. The wool trade needs financing : as many as 800 Láhulás take about Rs. 100 in cash each year to Tibet to buy wool. Debts are generally paid promptly.

VETERINARY.

Veterinary.

In 1911 a donkey stallion was stationed at Kyélang, which is much valued. In 1916 a young Zángskar pony and two yaks

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Veterinary.

from Chumurti were provided by the District Board. The Veterinary Assistant tours in Láhul once a year for medical work and castrations: these activities of the Department are much appreciated. The people are intelligent enough to see the value of modern methods and do not practise the cruel Kulu method of "mulling" but they are still careless of wounds and injuries. Merino rams are also more likely to be a success in Láhul than in Kulu: there are three-quarter-bred flocks at Kólong and Góndhla.

DOMESTIC ANIMALS.

Cattle.

The cattle of Láhul are a cross between the Tibetan yak (*bos grunniens*) and the Kulu cattle. They are known as *dzo*, or *churu* and stand 9 to 13½ hands at the shoulder, hairy all over, with long tails reaching to the ground, and in colour white or black. The bullocks are excellent for the plough and the cows give from one to four seers of beautiful rich milk, which has none of the rough characteristics of buffalo's milk, and yields thick yellow cream. Pure bred yaks are kept for breeding purposes and maintained by the different *kothís*, a strong contrast to the indifference to breeding displayed in Kulu. The yaks remain above 11,000 feet in the summer. They fetch from Rs. 20 to Rs. 50 and their tails if white are much prized and known as *chauri*; these are sold to temples, etc., and fetch from Rs. 5 to Rs. 10 each. According to enumerations made in 1891 and 1909 the number of plough oxen (including half-bred yaks) appears to have doubled in 20 years, but even now their number is not sufficient to allow a yoke for each holding.

Ponies.

At the settlement of 1890-91 it was found that the improvement in means of communication had resulted in a great increase in the numbers of pack animals of all sorts kept by the landholders in Láhul. In 1890 there were said to be 703 ponies, 284 donkeys, and 12 mules in the country: the figures in 1909 were 745, 325 and 29, showing that there had been very little increase. Rates for hire have much decreased and the profits have dwindled. Numbers of animals are absent each year with their owners so that the enumerations can never be accurate. Láhulás breed ponies to a much larger extent than is practised in Kulu and they also import them from Ladák and Yárkand. The *jágírdár* takes Rs. 8 as redemption money for all the colts foaled in his *jágír* and in *khálsa kothís* a similar sum is paid to the *kothi* fund.

Flocks.

The local sheep and goats, as well as the ponies, are used as pack animals, and employed in the carrying trade; the number was estimated at 25,936 at the enumeration made in 1912. A larger number would, doubtless, be kept if it were not for the

Flocks.

difficulty of feeding them in the winter when the snow lies too long, and is too deep for them to live out of doors. A great many migrate with their owners into Kulu for that season. They derive no benefit from the high-lying sheep-runs which yield such excellent pasturage in summer, as that is the trading season.

Dhár or sheep runs of Gaddi and Kulu shepherds in Láhul.

For a very long time, therefore, the upper parts of the main valleys, which are uninhabited, and the grounds high above the villages in the inhabited parts, have been utilized by the Gaddi shepherds of Kángra and Chamba, and the shepherds of Kulu. The snow begins to disappear in these places about the beginning of June; the shepherds do not ordinarily enter Láhul before the end of that month, and they leave it again early in September, by which time the frost is beginning and the rainy season in the outer Himalayan country has come to an end. In the fine dry climate of Láhul the sheep escape the foot-rot and other diseases which constantly attack flocks kept during the rains on the southern slopes of the outer Himalayas. The sheep arrive wretchedly thin, but by the time they are ready to leave are in splendid condition. A short fine grass, of a dull bluish-green colour, called *niru*, is their favourite food; *mat* and *morár* are names of other good kinds of grasses. The goats depend very much on the leaves and twigs of the birch and bush willow. The Gaddi shepherds are much more careful and energetic shepherds than the Kulu men; they may be seen herding their goats on the face of tremendous precipices; with one woollen coat and a blanket they sleep out exposed to an icy wind, and take no harm; sometimes, however, the cold drives them to creep into the huddled-up flocks, and pass the night with two or three sheep on top of them for a covering. Their sheep are reputed strong and hardy above those of any other shepherds. People as far away as the Bhotia traders of Kumáon buy a great many every year at high prices as beasts of burden for the trade over the great snowy range between Kumáon and Tibet. These grazing grounds or sheep-runs of foreign shepherds in Láhul are called *dhárs* or *bans* or *nigáhrs*. A *dhár* or *ban* is often subdivided into several *vands*, each *vand* containing enough ground to graze one full flock or *khanddh* of sheep and goats. Each *dhár* has its more or less precisely fixed boundaries, and the *wárisi* or title to it is understood to have originated in a grant from a Rája of Kulu, or a Thákur of Láhul. Among the Gaddís some transfers by gift or sale appear to have taken place, and in several cases the original family which obtained the grant has long ceased to use the *dhár*; but in recognition of its old title the shepherd now in possession has to halt a day on the journey back, and let his sheep manure the fields of the original owner,

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Dhár or sheep-runs of Gaddi and Kulu shepherds in Láhul.

with whose permission his occupation commenced. Whether the original owner could now turn out an old occupant of this kind is a doubtful question. The grey-beards seem to think that he could send up any number of his own sheep, but could not put in a third person to the detriment of the old occupant. The title of the Kulu shepherds to their *dhárs* is the same as that by which they hold their *nigáhrs* in Kulu. In some few instances a *dhár* was granted to a *wazír*, or person of influence, as a personal favour; but, as a general rule, they seem to have been given to the men of certain hamlets or *phátís* collectively, though perhaps the *patta* or deed of grant contained only one man's name. There are many fine runs in the uninhabited part of the Chandra valley above Yari Khóksar, which, before we took the country, were seldom if ever used. Bakhtáwar of Lala, a leading shepherd of Kángra, obtained from Mr. Barnes the privilege of grazing the unoccupied runs in this country. An almost equally large tract at the head of the Bhága valley has been held for generations by another Gaddi family, which obtained a similar grant from the Thákur of Kyélang. Both these families have of late years begun to take a fee from the numerous shepherds who join them in grazing these lands. The runs held by the Kulu shepherds all lie between Yari Khóksar and Góndhla in the Chandra valley.

Payments for grazing.

The Gaddi shepherds used to pay one or more sheep for each run, in *jágír kothís* to the *jágírdár*, and in *khálsa kothís* to the *wazír* as the representative of Government. This tax was known as the *kár*, or in Tibetan as the *ri-yi-thal* or *ri-thal*. In most cases the amount first fixed seems to have remained unchanged ever after. The Rája of Kulu excused the Kulu shepherds from this tax, as they paid one anna per head per annum on all sheep and goats, which was collected in Kulu.

Most of the Gaddi shepherds also give a sheep or two under the name of *bhagti* to the men of the village next below their run. Such sheep are sacrificed and eaten in a village feast at which the shepherds attend. The fee appears to have been originally given freely to secure good will, but it is now considered a right, which could be enforced. Where the grazing ground above a village is of small extent, it is all the *chára* or private grazing of the villagers, into which they do not permit the foreign shepherds to intrude; but in some years they permit a stray flock to squat there for a consideration. The flocks from Chamba mostly enter Láhul by the Kukti Pass, which descends into Jobrang *kothi*. The passage of so many is somewhat of a nuisance, so by old custom the shepherds pay the men of the *kothi* one sheep per *ban* or *dhár* under the name of *batkaru*. In

the same way they pay toll for crossing certain *jhulás*, or swinging bridges, to the men of the villages who erect them, under the name of *arkaru*. For instance, the Jobrang men take one sheep per *vand*, or division of a *bun*, from all who cross their *jhúla*.

Payments for grazing.

At the first Regular Settlement the policy approved by Government was to remit all *tirni* or grazing dues on sheep in Kulu and Láhul, but at the revision of Settlement of 1871 it was ascertained that while the Kulu shepherds continued to enjoy immunity in regard to the Láhul grazing as they had done under the Rájás, the Gaddís had continued to pay the old customary *kár*, not only to the *jágirdárs* in the *jágír kothís*, but also on account of the *khálsa kothís* to the *wazír*. This arrangement was continued authoritatively, it being understood that the rent of the *khálsa* runs was enjoyed by the *wazír* as part of his official income, but it was decided that at the next settlement the question of increasing the tax and of also imposing it on the Kulu shepherds' runs should be considered.

Accordingly, in 1890 an enumeration was made of the flocks of foreign shepherds grazing in Láhul, and a grazing fee at the rate of quarter of an anna per sheep or goat (or Re. 1-9-0 per hundred) was imposed by Government. The rate was fixed with reference to an estimate made of the profits enjoyed by shepherds, and corresponded with that charged for the grazing of Kulu flocks on the high pastures within Kulu Proper, but outside the *kothi* of the owners, while it was only half the rate fixed for foreign shepherds who bring their flocks to the Kulu high pastures. A higher fee was not approved because of the short time for which the Láhul runs are occupied, the uselessness of the ground for any other purpose, and the discouragements which the Gaddi and Kulu shepherds are encountering elsewhere at other seasons of the year by forest reservations and rules and by the increase of dues in Native States.

On the basis of this rate applied to the results of the enumeration of 1890 a rent was fixed for each sheep-run in Láhul, and leases at these rents for the period of settlement at a reduction of 10 per cent. were granted to the shepherds using the runs. In *jágír kothís* these rents were considered to be the old *kár*, the right of the *jágírdárs* ; in *khálsa kothís* they are collected by the *wazír* who, after deducting one-fourth as part of his official renumeration, pays the balance to Government as miscellaneous land revenue.

The *tirni* estimated in 1890-91 to result from the leases was Rs. 832, but as not more than 20 shepherds accepted the system and the rest preferred to pay by periodical enumeration, only

CHAP. II. Section A. Payments for grazing.

Rs. 674-1-6 was collected from the fixed rents of runs. In 1913 Government issued orders—

(1) abolishing the system of leases :
(2) retaining the rate of ¼ anna per head of sheep and goats :
(3) continuing the system of collection of *tirni* in *khálsa kothis* by the Thákur of Lahul, with a remuneration of 25 per cent. of the sums paid :
(4) allowing *jágirdárs* to collect their own *tirni*, but requiring from them proper accounts of the sums received and the numbers of animals involved :
(5) exempting Láhulás and nomad flocks as before :
(6) assigning the *tirni* to miscellaneous revenue.

Numbers of sheep and goats.

The numbers of sheep and goats have not materially increased, owing to the mortality of goats due to lung disease (*photka*). This swept off many goats and scared away migrant flocks in 1912 when an enumeration was made. The *tirni* from *khálsa kothis* in 1911 amounted to Rs. 1,659-6-3 which is about the average figure, but in 1912 only Rs. 903-7-9 was collected. For Láhul sheep and goats the highest figure reached was in 1909 when there were 40,594 animals counted, including 31,808 sheep and 8,786 goats. The following table compares the numbers of the flocks grazing in Láhul at the two last settlements :—

—	Kulu.	Chamba.	Kángra.	Total foreign.	Láhula.
1891 ...	51,665	53,043	63,205	167,913	16,561
1912 ...	44,766	25,409	58,778	128,903	29,536

In normal years the fluctuations in *tirni* are not considerable, nor do the figures point to a great rise in the number of foreign animals grazed : comparing the average sum collected in 1895—99 with that of 1907—11 the difference represents an increase of only 4,419 animals. The Láhula flocks according to the periodical enumerations appear to have greatly expanded especially in goats, but the count can never be taken as accurate. Arrangements have now been made for a separate annual return for sheep and for goats of foreign shepherds.

Irrigation.

As described above, irrigation is done by means of watercourses led out of the side valleys and ravines of the great rivers. A dam is placed in the bed of the stream to head up the water

Irrigation.

and the cuts (*yúr*) are aligned along the sides of the nullah: they are cleared every year and are usually sufficient. In some cases, however, the water-supply is scanty (*e. g.*, at Góndhla) and the channels, which leak considerably, need waterproofing. The water is led from field to field, filling first the top plots, and through them those lower down. A realignment of the water channels, so as to provide direct watering to each field from the cut, would in many cases add very much to the produce of the fields. As it is, the upper fields get too much water and are scoured by continual flow, and the lower fields often get too little. The levelling is also indifferently done by hand, and bullock shovels and some instrument like the *suhága* of the Punjab are needed. There are no wells nor is there any lift irrigation.

Fishing.

There is no fishing industry in Láhul.

SECTION B.

RENTS, WAGES, AND PRICES.

Rents and wages.

Very little land is let out to tenants, and where it is, a cash rent is usually paid, otherwise the landlord takes half of the gross produce (*phéshé*, Bunan, *phéd shás* Tinan). In the *jágírs* it is customary to grant plots rent-free to farm servants and family retainers in consideration of their cultivating the land owned by the *jágírdár*, or rendering personal domestic service to him. In this way doctors, astrologers, musicians, and metal-workers hold lands rent-free of the Thakurs and sometimes of the villagers also, in lieu of service. There is no regular wage-earning class.

Prices.

There is very little produce for sale: the barley which is sold at Patseo to Tibetans and Ladáki nomads, and to travellers, has to be replaced by grain imported from Kulu: and in Kulu the rise in prices has been as great as in Láhul. There is no *bázár* in Láhul and no regular record of prices. They had been exceptionally high during the six years preceding the present settlement, and grain had sold in Láhul at the following rates:—

Wheat	...	13 to 16	seers per rupee.
Barley	...	16 to 30	ditto.
Peas	...	8 to 10	ditto.

Peas were also exchanged for double the weight in barley. In calculations made for the purposes of assessment of land revenue in 1913, the prices were assumed to be :—

Wheat	...	40 annas	per maund.
Barley	...	32	ditto.
Peas	...	60	ditto.
Buckwheat	...	20	ditto.

SECTION C.

FORESTS.

CHAP. II. Section C. Laws and rules.

The Láhul forests were settled by Mr. Alexander Anderson in 1886, and on 24th March 1897 Notifications Nos. 154 to 157 were issued, constituting the demarcated and undemarcated protected forests under Chapter IV of the Forest Act (VII of 1878), declaring certain trees to be reserved, *i.e.*, juniper, kail and birch, and closing certain areas under section 29 (*b*) of the Act. On 14th July of the same year Notification No. 375 was issued containing rules for the management of the forests under section 31 of the Act. The areas now closed by Notification No 102, dated 7th March 1916, consist of 80 acres in Muling Forest, and 200 acres in Kárdang, certain areas which had been closed in those forests in 1897 being simultaneously thrown open, and the rest remaining closed.

Description of the forests.

There are seven forests of a total approximate area of 2,680 acres, three being near Kyélang, two opposite Góndhla and two near the lower end of the Chandrabhága. The principal species are kail, juniper or *shugpa* (*juniperus macropoda*), and birch or *bhurj* (*betula utilis*) : dwarf shrubs of *juniperus communis* and *recurva* are also common, and are used for firewood. A prominent feature of the countryside is the extensive cultivation of the crack willow (*salix fragilis*), the Lombardy poplar (*populus nigra*) and the Himalayan poplar (*populus ciliata*). The following trees and shrubs are also found :—*Salix* of several kinds, including the osier ; sallow thorn, hawthorn, walnut, wild rose, a rough gooseberry, red currant, bird cherry, barberry, with *viburnum fœtens* and *fraxinus xanthoxyloides*. Apple, pear and apricot trees are cultivated : the apple does particularly well and its cultivation will be extended. The vegetation in the lower part of Pattan resembles that of Chamba-Láhul. In the upper valleys it is very scanty and consists only of birch and dwarf juniper.

Kail is found at intervals along the left bank of the Chandra, from a point between Khóksar and Sissu down to the Chamba border. Except in Muling where there are still some big trees, the kail are generally of small size and occur either in bands of canopied trees or scattered among the cliffs where the soil is sufficient : reproduction is fair. Snow-slides render much of this bank precarious for trees. The kail forest of Kárdang is situated on the left bank of the Bhága.

Juniper is chiefly found about Kyélang and on the right bank of the Chandrabhága in *Kothi* Jálma. The soil *in these places consists of loose stones and dust and appears to be unfavourable to vegetable growth of any kind.* The

juniper forms forests of scattered isolated trees of medium size, few large trees are found, and there is only a limited amount of reproduction. In the best parts the trees are nearer together, but the forests present a most miserable appearance and no improvement in these is to be expected.

Description of the forests.

The birch is found all along the left bank of the Chandrabhága, and in many places forms canopied forests above the kail, or mixed with it. Birch is used for buildings and ploughs and the young twigs for making *jhúla* bridges.

Lombardy poplars (*yúlad* or *pág*) were introduced by the Moravian mission and have done very well, particularly on the lands of the *Wazir*. This tree is propagated by cuttings in the same way as the willow (*beli*). The poplar is likely to be a most valuable acquisition for Láhul, and the wood is used for building timber and grows very quickly. The kail and juniper are very slow-growing trees in this high tract. Willows are planted in long stakes, generally three together, and are pollarded every three or four years. The bark is eaten by sheep and goats in the winter, when the wood is taken, and the leaves in the summer. The twigs are used for basket-making and hurdles. The poplar and willow are the property of those who plant them, even if growing on waste land not included in any holding.

Management.

The Láhul forests form part of the Kulu Forest Division, but the Forest Officer can only visit them at intervals of several years. The management is in the hands of Thákur Mangal Chand, the younger brother of Thákur Amar Chand of Kólong, under the direct orders of the Assistant Commissioner who visits Láhul every year. The administration has been efficient and reflects credit on Thákur Mangal Chand: the closures have been enforced, trees given out with care, and rules are not often broken.

In June 1914 Government sanctioned the appointment of five *rákhás* or keepers on Rs. 30 each per annum: these men have been provided with uniforms and marking-hammers and instructed in the work of sowing. Kail is now sown annually in Kárdang and Duling forests. The minimum girth for kail to be felled is now 4½ feet. The prices of juniper and kail have been doubled, and now stand at 8 annas and Rs. 2. The Muling and Kárdang forests are the most important, and on them the maintenance of public works mostly depends: every effort is therefore made to improve these forests.

The financial side of the working of the Láhul forests is shown below :—

		Rs.
Revenue, 1903—1913	...	... 2,334
Expenditure, 1903—1913 ...	...	714

SECTION D.

MINES.

CHAP. II. Section E. — Mines.

Láhul is not rich in minerals. There is some gold to be washed out of the sands of the Chandra and Chandrabhága, and there are sulphide of antimony (stibnite) workings at the Shigri glacier, which were at one time rented by Colonel Rennick of Kulu. But there is nothing at present obtained from the latter source.

SECTION E.

ARTS AND MANUFACTURES.

Painting.

The *lámás* are the principal exponents of the various arts, such as they are, in Láhul. There are some interesting pictures in the monasteries, painted by them with colours obtained from down-country. The subjects are religious and of stereotyped styles. The pictures are to be found on temple walls and on banners hung up in the temples and monasteries. Idols of large size, medallions with Buddhistic images, and demon masks are also cleverly made of clay and painted by the *lámás*.

Astronomy. Printing.

The leading *lámás* are skilled in astronomy (and also in divination, sorcery, and necromancy), and compile their own yearly calendar. They do their own printing, using simple wooden blocks for the purpose : one book has been printing for three years and will be completed this year (1917) : the characters are well formed. Printing is also done on charms and prayer-flags. Books are made up of long leaves, written lengthwise from left to right, and the characters resemble those of Sanskrit. The books are kept in pigeon-holes in the monasteries, and not much care is taken of them, the dry air and elevation being inimical to mould or insects. The ink for printing is made by mixing kerosene oil soot with glue-water. When supplies of writing ink give out, rice is roasted till nearly burning-point, and then boiled with a little water. Paper is imported from Kulu, and is made by Kanáwarís.

Stone carving.

The *lámás* cut very elegant inscriptions on stones, especially the *Om mani padme hum* of the *mani*-walls.

Carpentry.

There are a few skilled carpenters in Láhul and carving may be seen at the monasteries. Neat little Tibetan guest-tables are made and painted by *lámás*, with emblems of the lotus flower, dragon, and lion's head. The Láhulás also manufacture their own riding and pack-saddles, riding-saddles in particular being made of a useful and comfortable pattern, and sometimes gorgeously painted with dragon figures.

Metal work.

The local blacksmiths (Gárás) turn out very rough iron work, and also inferior qualities of silver, copper, and gold work, including silver amulets set with turquoises, silver rings, ladies' ornaments, copper and silver prayer-wheels, etc. Many of these articles are taken to Chang-tang in Tibet by Láhula traders. More skilful work is done by Kanáwarís from Bashahr, who come up every summer. The idols, silk pictures, etc., necessary for worship are imported from Ladák, Zangskar, Spiti, Tibet, and Nepál.

Other manufactures.

Woollen cloth, of a coarse and loosely woven texture and narrow width, is turned out by almost every house in Láhul. Better stuff is made by Kanáwarís. A useful though very coarse fabric for carpeting, called "*chali*," is spun and woven from goats' hair in a width of about eight inches by Láhulás. When sewn together, this material provides serviceable carpets, bedding, and strong bags for conveying merchandise. Ropes are made of goats' and yaks' hair. Straw shoes are worn by all classes of Láhulás and are made throughout the country. The straw is of wheat and rye, and the shoes are warm and comfortable, particularly suitable for winter. Straw mats are also made. Rough but strong baskets are made of willow twigs, and are chiefly used for field work. Small light hand-baskets are made from thin strips of juniper wood. Pottery is chiefly manufactured by Ladákís. Stone jars, low and wide, are cut from soft stone (soapstone ?) found in Upper Láhul, by Baltís. This vessel (*doltog*) is considered indispensable for making a really good pot of Tibetan "butter-tea."

SECTION F.

TRADE.

Trade.

The Láhulas are born traders and make much money by trade every year. The limitation on the prosperity of the traders is the fact that the route from Tibet to Srínagar is easier and better equipped than the way through Ladák to Láhul. There are no villages between Gya and Darcha (Dártse), while there are at least three high passes, with little grazing for beasts of burden. There is an ancient compact between Tibet and Kashmír dating from 16th century whereby the Tibetan wool is sold to Kashmír, and this traffic cuts across that which might otherwise come down to Láhul from Yárkand. The Tibetan officials charge heavy duties on imports into their country from British India and have even begun lately to tax exports. So the only two courses left open to the Láhula traders are to take cash into Tibet each year and buy wool, and to welcome as much trade as comes to Láhul by

CHAP. II. Section G.

Trade.

Ladáki and Tibetan caravans. Each year hundreds of Láhulás go into Tibet in summer and buy wool, paying cash for it. They returned in 1916 with nearly a lakh and three-quarters worth of wool. They bring the wool down on their own sheep and send them back to Tibet for the winter grazing. Salt and borax are also brought, but only by the way. They are unimportant items. The wool brought down by other traders in 1916 was valued at over a lakh and a quarter. This is sold at Patseo to Láhulas and other traders from Kulu, in July and August. The fair at Patseo is held on the right bank of the Bhága river, on a large plain where stone shelters are built. There the wool, salt, and borax are unloaded, the sheep shorn, and barley, wheat, "pohee" or green tea, metals, cloth, sugar, tobacco and other Punjab products are given in exchange. The trade post has now been moved to Kyélang from Sultánpur and trade is more fully recorded. Láhulás take their wool all over Kulu and the Hill States and make comfortable incomes by their winter trading. The Sarájís usually pay for their wool in May, at the Banjár fair : the Kulu people pay cash down or at the Pípaljátra fair at Kulu in April. There is some trade with Spiti The Spiti men bring the manufactured products of Lhása and Central Tibet, and take back raw hides.

SECTION G.

MEANS OF COMMUNICATION.

Main road.

Láhul was not an easy country to traverse until the rivers were bridged. There are now good cantilever bridges over all the streams traversed by the Simla-Leh trade route. This road is unmetalled, but of a good width. It goes from the crest of the Rotang pass down to Khoksar rest-house, crosses the Chandra by a bridge, the footway of which is taken up before the winter, then runs down the right bank to Sissu and Góndhla, where there are rest houses, crosses the Bhága river at Tandi and follows the right bank of that stream as far as Patseo, *viâ* Kyélang and Jispa rest-houses. At Patseo the road comes over again to the left bank and follows it to Zingzinghár, where there is a sarai and shop for supplies. Thence after crossing to the right bank again the road ascends to the Báralácha Pass (16,047 feet) and follows down the valley of the Yunan River to Kyinlung, where there is another sarai and shop. Thence it runs to the Lingti plain and the boundary of Zángskar. The way from the Báralácha is over a very high plateau, at 14,000 feet above the sea. There are shelter huts both on the Rotang and the Báralácha passes. There are six rest-houses and seven sarais on this length of 100 miles, and the facilities for travel by this route are undoubtedly good.

No. 15. Bridge made of birch twigs over Chandra River. Lahul.

Other roads.

The District Board keep up the road from Tandi to Thirót, on the Chamba border, at a cost of Rs. 135 per annum, at present, and also repair the route from the Hamta to the Kúnzom pass whenever the Assistant Commissioner tours that way, and a bridge over the Chandra at Gushál, with a *jhúla* over the same river at Sissu. The people themselves keep up a *jhúla* at Tandi, and two bridges opposite Kyélang over the Bhága. There is a rough track down the left bank of the Chandra from the Bára-lácha Pass to Spiti *viâ* the Morang Pass, on the Kunzom ridge: it also connects with the path from the Hamta to the Kunzom. It is an easy route but extremely stony and there are no villages on it or on the Hamta route.*

Bridges.

On the main road the bridges are of the substantial canti-lever type common in Kulu. The locally-made bridges are much lighter and are only used in very narrow places. The *jhúlas* are suspension bridges of from 50 to 150 feet span, made of thick ropes of twisted birch twigs. Three ropes form the roadway, and two hand-rail ropes hang above, one on either side, and are attached to the roadway by small side ropes, fastened at inter-vals of a foot or two. The best of these bridges are passable for sheep and goats, if the sides are wattled in with wicker-work, and slabs of stone placed on the roadway. In a high wind many of them are dangerous to cross, even to a native of the country. They are called *tzá-zam* in Tibetan, and *jhúla* or *áwa* in Hindi, and differ from the *jhúla* which is used on the Sutlej and other rivers. The latter consists of a cradle or a rope, pulled across by a guy rope, and is not used in Láhul.

The problem of substituting something more substantial for these birch-twig *jhúlas* has often been considered, but there are certain engineering difficulties which make it probable that the locally made *jhúla* will remain.

Direct route from Dharamsála viâ *the Kukti Pass.*

Minor routes.

Between Lód and Jálma there is a *jhúla* bridge across the Chandra at Jobrang village, from which a footpath crosses the Kukti Pass, about 16,000 feet elevation, rather steep near the summit, with glaciers on both sides cut up with crevasses, but otherwise not difficult. The path descends on the other side to Bharmaur (Chamba territory) in the Ravi valley, which is separated by another high pass from Dharamsála.

Besides the Kukti Pass there are two others over the watershed between the Chenab and the Ravi.

* See the table of routes given in Part II. Kulu and Saráj.

CHAP. II. Section H.

Between Láhul and Bara Bangáhal.

Minor routes.

Asa or Asákh, called in maps the Bara Bangáhal Pass.	Between *Kothi* Gushál, opposite the Tándi, in Láhul, and Bara Bangáhal. A difficult pass, seldom used, 16,820 feet high.
Nilgáhar ...	Between the ravine of that name which divides *Kothi* Gondhla and Gushál in Láhul and Bara Bangáhal. Has hardly ever been used.

Between Láhul and Zangskar.

The path lies up the Kado Dokpo opposite Dárcha and crosses the Great Himalayan Range at 16,722 feet by the Shingo or Shíngkún La. There is a large glacier on the top, which was crossed by Wilson in 1873 (*vide* his "Abode of Snow," 1875, Blackwood & Sons). The top is narrow and quickly crossed.

Postal arrangements.

There is one post office, at Kyélang, managed by a branch postmaster, in connection with the sub-office at Manáli. The mails come and go every other day for six to eight months in the year if the weather allows.

SECTION H.

FAMINE.

Famine.

There has never been any famine in Láhul.

CHAPTER III.—Administrative.

SECTION A.

ADMINISTRATIVE DIVISIONS.

Láhul is divided up, as already explained in Chapter I, Section A, into three *iláqas*, each consisting of from four to six *kothis*, which in their turn are made up of villages, assessed separately to land revenue. The revenue staff consists of two *patwáris* who are under the control of Thákur Mangal Chand, younger brother of Thákur Amar Chand of Kólong, exercising the powers of a Náib Tahsíldár in regard to mutations and *jamabandis* which do not concern his family. The general control is vested in Thákur Amar Chand who has a court at Kyélang and is called the Wazír. His work is honorary. He arranges for all supplies for officials and other travellers and has charge of the collection of the *tirni* or grazing fees in *khálsa* sheep-runs. His brother manages the forests. The tract is for revenue purposes united with the Kulu tahsil.

Village self-government.

There probably always existed a certain amount of self-government in the *kothis*. The monasteries have their funds and there are periodical meetings of the villagers to settle various matters, such as the levying of funds for common purposes of the *kothi*. But the country has always been ruled by Thákurs, or Jos, as they used to be called, and this control has to a large extent survived.

Begár.

One change in the economic arrangements of the *wazíri* since the revision of settlement of 1891 has been of peculiar benefit to the people. The useful old custom of employing forced labour for the repair of the trade-route has been abolished. This labour was paid for only when exacted on the more remote parts of the road. Now those who wish to work can earn from three to six annas a day at times convenient to themselves. The obligation to supply carriage for travellers remains. This is a most irksome burden for the *kothis* which attend the remote Khoksar stage, but is not oppressive elsewhere. Most travellers through Láhul now employ mules hired in Kulu, and the existing *begár* in *khálsa kothis* generally is certainly not excessive in comparison with that in *Wazíri* Parol. The demand however all occurs in the six months of summer when many landholders are absent on trading journeys and when all farming operations have to be carried out. It is distributed equally over each holding. For ordinary journeys

CHAP. III. Section A.

Begár.

within Láhul each *kothi* supplies porterage at the stages within its limits. For the passes, the four *kothis* of Rangloi undertake the carriage over the Rotang Pass into Kulu: the *zemindárs* of Jagatsukh are responsible for the journey over the Hamta Pass to Spiti: while the ten *kothis* of Gára and Pattan are arranged on a common roster for the work on the Báralácha, Shingkún, and Kukti routes. The accounts of work done are kept for each holding and for each *kothi* and the contributions are balanced. For porter substitutes over the three latter passes enough meal is given for the journey and up to Rs. 4 in cash, by the defaulting party. Common accounts of the *kothi* are kept by the *lambardár*: supplies are collected at stages by contractors who are given advances by the landholders, except at Zingzingbár and Kyínlung, where Rs. 200 is paid annually by Government to contractors during the autumn trading season. The Dágís of Pattan hold *m'áfis* on conditions which compel them to collect wood at certain stages, to carry dandies or *pálkis* when necessary, and to take 12 loads to Kulu and back for the Thákur of Láhul.

SECTION B.

CIVIL AND CRIMINAL JUSTICE.

Civil and Criminal Justice.

The only Court in Láhul is that of the Wazír, sitting as Honorary Munsif and Magistrate of the 3rd class. The criminal cases rarely result in sentence, being usually compromised: there is very little thieving. The Wázír is also the Sub-Registrar: his work is light. There is some demand for a Court with higher powers, owing to the difficulty in getting to Courts in Kulu.

SECTION C.

VILLAGE COMMUNITIES AND TENURES.

Sub-divisions in Láhul: nature of townships and villages.

The nature of a *wazíri* has been explained in Part II, and Láhul is one of the two Kulu *wazíris* (the other being Spiti) that may still be correctly so designated, as their administration is entrusted almost entirely to local magnates who continue to bear the title of Wazír. The Wazír of Láhul, at present Thákur Amar Chand, is also sometimes described as *negi* of the *wazíri*, from his having been responsible for the collection of the land revenue in the same manner as the *negi* of a Kulu *kothi* The division of the *wazíri* into fourteen *kothis* has been described in

Sub-divisions in Láhul: nature of townships and villages.

the first chapter of this part. The *kothis* are not sub-divided like those of Kulu Proper into *phátis*, being of small size in respect of population and cultivated area A list of the hamlets of which they are composed is given in the Settlement Report of 1910-13 Separated by greater distances than usually divide the Kulu villages, the hamlets do not so frequently as in Kulu present instances of fields nominally belonging to one hamlet, the residence of the owner, but lying within the limits of another ; the boundaries in the waste of the land pertaining to each hamlet have always been well known to the people, and were demarcated without dispute in 1891. But up to that year the boundaries between *kothis* were capricious, if indeed they could be said to exist at all; nearly every *kothi* possessed an outlying hamlet or two lying in the centre of another; and *kothi* Ranika consisted of several villages, scattered here and there among those of other *kothis*, which were formerly held in *jágír* by a Kulu princess, and which had ever since been held together as one community under one headman. It was desirable, both for the convenient regulation of *begár* arrangements and with reference to the provisions of the forest settlement as well as for increased facility of revenue collection, that this state of affairs should be reformed, and accordingly in connection with the revision of settlement of 1891 definite boundaries were demarcated between *kothis*, and each *kothi* was recorded as containing all the villages lying within its demarcated boundaries and none beyond them. The hamlet was found to be a more convenient assessment unit than the *kothi*, and so the revenue of each hamlet was fixed separately without, however, affecting the joint responsibility of the people of the *kothi* for the revenue of the *kothi* as a whole. The headman of each *kothi* is known correctly as *lambardár*, not as *negi* as in Kulu, but the use of the correct term under the Land Revenue Act is due not to a superior acquaintance with the terms of the Act, but to the fact that the *Wazír* was recognized at the first Regular Settlement and also at the Revision of 1871 as the *negi* of the whole fourteen *kothis*, and entitled to nearly the whole of the *pachotra*, or five per cent. cess, levied in addition to the revenue for the remuneration of village headmen. As, however, the position of the *Wazír* was bettered in other respects at the Revision of Settlement of 1891 it was found possible to make him resign this source of income, and the *lambardárs* of *kothis* from that time receive the remuneration and discharge the duties of village headmen. At the same time arrangement was made, as was done in Kulu Proper, for the regulation of the number and remuneration of village watchmen in accordance with the Rules under Act IV of 1872 instead of by the collection of a cess on the land revenue as had previously been the case.

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Rights in waste lands.

The waste lands are owned by the ruler of the country or superior landlord, a position which appears to have been formerly occupied by the Rája in a *khálsa kothi*, and the Thákur in a *jágir kothi*. It appears clear that the Thákur must be considered to have been lord of the waste, for his permission was necessary before new fields could be made in it, and such fields paid him rent thenceforth; he could also grant sheep-runs in the high wastes to foreign shepherds, and take grazing dues from them; so, again, the estate or *jeola* of a landholder dying without near heirs lapsed to him, and was granted by him to a new man on payment of a fee or *nazrána*. The rights of the *jágirdárs* in these respects were not affected by the recomposition of *kothis* described above, though several *jágir* villages lie within the boundaries of *khálsa kothis*. The limits of the waste land attached to such hamlets within which the villagers can extend their cultivation are demarcated, and the *jagírdár* takes rent for new fields within such limits. And with regard to sheep-runs in the high wastes a careful record was prepared in 1890, showing without reference to *kothi* boundaries which of these are *khálsa* and which are *jágir*; for a full account of sheep-runs see pages 221-224. No right of property on the part of the *jágirdárs* in the forest trees growing on waste land within their *jágirs* has, however, been recognised by Government. The forests and forest settlement are described on pages 226, 227.

All the villagers have rights of use in the waste, but the cattle or flocks of one *kothi* sometimes graze regularly in the lands of another, and the men of one *kothi* sometimes rely for fuel and timber on the trees growing in another. Within the *kothi* also the different villages use the grass and wood indiscriminately; where the villages are far apart, they keep in practice to separate grounds: where close, they mingle; it is all a matter of custom. There is no other rule by which a dispute can be decided. From the bare and unproductive character of the hill-sides outside the forest boundaries it follows that in Láhul very elaborate rules were not found necessary like those relating to the Kulu undemarcated waste, though, as in the case of Kulu, Mr. Anderson proposed to declare it protected forest. The most valuable portion of it consists of the high-lying sheep-runs, which are scarcely if at all made use of by the Láhulás for their own flocks.

Original form of holdings of fields.

The holdings in cultivated lands in the *khálsa kothis* do not differ materially from *zamíndári* holdings elsewhere, but they were originally regarded as allotments held subject to feudal service which, for want of another name, may be called *jeolás*, as in Kulu. The allotments of fields or *jeolás* are supposed to have been

Original form of holdings of fields.

made authoritatively at some remote period, and to have originally been all equal, and subject to the same amount of rent or taxes, and all liable to furnish one man for service or forced labour when summoned by the lord of the country. They also appear to have been indivisible. In fact, in Gára and Rangloi, where the Tibetan element predominates in the population, they are still almost all undivided; in Patan, where the people are chiefly Hindu, a great deal of sub-division has taken place. After the first allotment was made other fields were sometimes reclaimed from the waste; these were sometimes farmed into a separate allotment, and rated at a full *jeola*, or a half or a quarter according to value; or if they were reclaimed by one of the original holders, his holding was thereafter rated at 2 *jeolás* or 1½ or 1¼. A household owning two *jeolás* had to pay double taxes and take a double share of service; if it held a half only, it was rated in strict proportion. After a time when not much room for further extension of cultivation was left,* the assessment or rating on each house or *jeola* became fixed hard and fast; no one in authority took the trouble to revise it, though, of course, as time went on, the proportions of the holdings did not remain exactly the same. Some fields were increased by gradual encroachment on the waste, and a few others changed hands. Sale of land was unknown, or the changes would have been greater.

Size of holdings.

On the average there is less than 2 acres of cultivated land in a holding and nearly half the holdings contain less than half an acre of cultivation.

The following description of the rights of the Thákur and subordinate landholders in the *jágír kothís*, taken from Mr. Lyall's Settlement Report, remains true at the present day and throws an interesting light on local customs.

Rights of the Thákurs and other landholders in *jágír kothís*.

The *jágír kothís* in Láhul are three in number—Kólong (or Tód) held by Thákur Amar Chand, Gúngrang held by Ratan Chand, and Góndhla, held by Híra Chand. Of this last-named *kothi* a half was described in the earlier settlement papers as resumed; one of the last Rájás of Kulu did in fact resume half, but practically the whole remained undividedly in possession of the Thákur, who accounted to the Rája for half of his collections of all kinds. After Regular Settlement he continued in the same way to exact the old dues and services from all the landholders, and to pay the Government the land-revenue for half the *kothi*, plus *nazrána* on account of the other half. The whole of his payments may be considered to have been of the nature of *nazrána*. The nature of the holdings of arable lands in the *jágír kothís* is as

* There is, of course, any amount of waste land in Láhul, but no cultivation is possible without irrigation; and the land so situated that it can be irrigated by existing channels, or channels easily to be made, has long been fully occupied in the lower and less inclement parts of the country.

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follows: the whole produce of certain fields is taken by the Thákur; this land is cultivated by farm servants (*kháng ch'úng-pá*), assisted on certain occasions by gatherings of the regular land-holders; it is known as the Thákur's *garhpán* or home farm, and, as a general rule, the greater part of it is situated in villages near which he lives. Other fields are held rent-free as maintenance by his *do-thái*, *i. e.*, by the *dunnéwassals*, or junior branches of his family, or rent-free in lieu of continuous service by his *ch'ágshi* or family retainers, or by *khang-ch'úng-pá* or farm servants. The great bulk of the fields, however, form the holdings (*jéola*) of the villagers (*yúlpa*), which are held subject to payment of *thal*, *i. e*, rent or revenue, the performance when required by *begár* or forced labour for the State, and of certain periodical services to the Thákur; an average *jéola* contains about 15 *lákh* (seed measure), or 5 acres. A *do-thái's* holding is on an average equal in extent to one or two *jéolás*; a *ch'ágshi's* holding varies between a half and a whole *jéola*; a *khang ch'úng-pa* generally holds only about a quarter *jéola* or less. There are some other small miscellaneous rent-free holdings, the revenue of which must be considered to have been remitted, not in lieu of service to the Thákur, but for the good of the whole community. For example, a few fields known as *gárzhing* are generally held rent-free by a family of blacksmiths (*gára*) not so much in lieu of service, for they are paid for their work separately, as to help them to a livelihood, and induce them to settle down. In the same way the *hési* or musicians hold a little land rent-free under the name of *lézhing*; the *jótshi* or astrologers under the name of *ónpózhing* and the *béd* or physicians under the name of *mán-zhing*. Astrologers and physicians are, however, men of the regular landholding class, who have also separate *jéolás* or holdings of revenue-paying land. The *lohárs* and *hésis* are low class people, who hold no land except a few fields given them rent-free. The *garhpán* land, no doubt, belongs solely to the *thákur* who is also landlord or superior proprietor of the whole *kothi*.

"The *yúlpa* or villagers," writes Mr. Lyall, "I hold to be subordinate proprietors of their holdings; so are the *do-thái*. At first I was inclined to think that the *ch'ágshis* and *khang-ch'úng-pás* were mere tenants in the *garhpán* or private lands of the Thákurs, but on further enquiry their title did not seem to be essentially weaker than that of any other class. They are never evicted, and the custom with regard to inheritance and power of mort-gage with regard to their holdings, and those of the regular land-holders, appears to be precisely the same. I consider them therefore to be also subordinate proprietors of their holdings, differing only from the *yúlpás*, inasmuch as they pay no rent, and do private service only to the Thákur; whereas the latter pay

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rent and do public service for the State (bigár), as well as occasional private service to the Thákur. I do not think that the lohárs, the jótshís or the béds could now be evicted from the fields they hold rent-free under name of smiths, astrologers, and physicians' land. Probably they could have been evicted by a vote of the community or order of the Thákur in former times, but the general idea now seems to be that they could hardly be evicted, however inefficient. The hésís, however, seem to be considered to hold at the pleasure of the Thákur." In some places a field or two are found held rent-free by a gonpa or Buddhist monastery, and cultivated not by any one family, but by the neigbouring landholders in unison. This land is considered to be the property of the monastery. So also patches of land under the name of lházhing or god land, cultivated by the man who acts for the time being as priests of some petty local divinity, are considered the property of the shrine, if there is any, and not of the cultivator, who only holds till he vacates the office of priest, which is not hereditary. Yúrzhing is the term applied to small fields found in many villages, the grain of which is devoted to a feast held by the men who repair a canal. It should be considered the common property of all shareholders in the canal. There are certain patches of waste land known as dáng and pírí, which are, like the cultivated fields, the property of individuals, and included in their holdings ; they are situated below the water channels, or on the sides of the fields, and with the help of the irrigation, produce abundant crops of hay. The rest of the waste must be held to be the property of the Thákur, subject to the rights of use belonging by custom to the subordinate landholders.

Rents and services rendered to the Thákur of Gúngrang.

The best way to describe the nature of the rents and services rendered to the Thákurs by the subordinate landholders will be to give a detail of them as they existed in one jágír in 1891. For example, Kothi Gúngrang contained 58 yúlpa jéolás, or full-sized villager's holdings, 24 full-sized holdings of ch'agshís or retainers, and eight of khang-ch'úng-pás or farm servants. The rent paid by the peasant proprietors on a full jéolá or holding consisted of the following items :—

No.	Name of item.	Rate per jéola.	REMARKS.
1	Old cash assessment ...	Rs. 4-8-0	On fourteen jéolás Rs. 5 are taken.
2	Grain (sé-thal) ...	8 lákh, 8 patha of barley ...	Three jéolás pay 6, and three pay 4 lákh.
3	Phari (cloth)	1 phari or eight annas in cash.	Cash now always taken.
4	Suri (lit. bribes) ...	From Rs. 5-4-0 to Rs. 2-8-0.	
5	Betangna	Rs. 2 cash.	

CHAP. III. Section C. — Rents and services rendered to the Thákur of Gúngrang.

The last item was put on by the Thákur at the Regular Settlement; the other items were all of older standing.

The following is a list of periodical services rendered to the Thákur by the men of this same class according to the old custom of the manor of Gúngrang :—

(1) On certain days, known as *bésti* days, each *jéolá* has to furnish one man to work on the Thákur's *garhpán* land.* The Thákur supplies food and drink, but no pay. There are eleven *bésti* days in the year, but two, the sowing and the mowing days, are distinguished as the big *béstís*; on them a man for each *jéola* attends, on the other nine only some fifteen or sixteen men who live near actually attend; the others remain at home, and pay the Thákur annually in lieu of attendance, the sum of one rupee under the name of *bésti* money.

(2) Each *jéola* is bound to stable and feed, for the six months of the winter, one of the Thákur's horses; one horse to a *jéola* is allowed to be the old standard; but as the Thákur has not so many horses, it has been customary for two *jéolás* to divide between them the care and charges of one horse.

(3) Each *jéola* is bound to convey once in the year eight or nine *páthu*, or about sixteen pounds of rice (a light goat or sheep load) from the Kulu valley to the Thákur's house in Láhul.

(4) It was the custom in all *kothis* of Láhul for the regular landholders each year to provide in turn a certain number of men to undertake the duty of supplying the common quarters of the *kothi* at Akhára, in Kulu, with fuel. For the six winter months spent in Kulu these men were steadily employed in bringing in fuel for general use, and they were in some degree remunerated by being paid Rs. 6 each, which sum was raised by a rate on all the *jéolás* of the *kothi*. In Gúngrang, each year four *jéolás* furnished four men for this duty, and they were also bound to carry loads for the Thákur in going to and from his house to Akhára, and to furnish him, as well as the subordinate landholders, with fuel while he remained there.

There are no *do-thái* or cadet families in the Gúngrang *jágír*. In other *jágírs* the *do-thái* are said after a time, when the sense of

*A similar privilege used to be enjoyed by the *lambardárs* of *khálsa kothís* in Pattan.

Rents and services rendered to the Thákur of Gúngrang.

relationship to the Thákur has become faint, to be degraded into *ch'ágshis* and forced to do service for their holdings. A *ch'ágshi* holding is held rent-free in lieu of the following services : it is bound to furnish one man for continuous attendance on the Thákur and for the performance of light work, such as cooking his food when on the march, leading his horse, &c. As, however, there are many *ch'agshi* holdings in Gúngrang, the custom now is that three holdings at a time furnish one man each for ten days, and then recall their men till their turn comes again. But for the privilege of not supplying one man continuously, they pay the Thákur eight annas per month per holding, or six rupees per annum. A few of the *ch'ágshis* are distinguished by the term of *lálog* or pass-crossers. These, instead of having to furnish a man for personal attendance, are only bound to furnish a man to cross a pass, either to Ladák, Zangskar or Kulu on the Thákur's business. If they cross a pass once in the year, the rest of it is their own, and they have no payment to make, but if not called upon to cross a pass, they pay seven rupees per annum as relief or *betangna*. Some *ch'ágshis* of all kinds now pay seven rupees regularly in lieu of all services by agreement with the Thákur. All *ch'ágshis'* holdings send a man to work on the two big *bésti* days, not on the others.

Khang-ch'úngpa may be translated cottager. The family in possession of a holding of this kind is bound to furnish one man for continuous work at the Thákur's house or on his *garhpán* land. Some holdings of this kind will be found near wherever the Thákur has *gárhán*. When there is much work, the head of the family attends in person, otherwise he sends his wife, or son, or daughter. The person who is in attendance gets food five times a day, and does field work of every kind, or cuts and brings in wood or grass, sweeps the house, or combs wool, &c. Those who live at a distance from the Thákur's house cannot practically attend ; they therefore do only field work on the *garphán* land near them ; but as they in this way get off lighter than the others, they are bound to feed and keep one sheep for the Thákur during the winter months. Some *khang-ch'ungpás* now pay five rupees per annum to the Thákur in lieu of all service. The *jágírdárs* were also entitled by ancient custom to all colts born within their *jágír*, owners of mares being allowed to retain only the fillies. The *jágírdár* of Gúngrang had, before 1891, commuted this right into a cash fee for each colt, but those of Kólong and Gondhla continued to take the colts until the last revision of settlement, when the other *jágírdárs* agreed to the commutation. In the *khálsa kothís* a fee of Rs. 8 is levied for each colt if it survives for a year after its birth, and is paid into the common fund of the *kothi*, being regarded, according to the adminstration paper in which the custom is recorded, as a grazing fee. The

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nature of the holdings, and of the rents and services paid to the Thákur, are the same in all the *jágírs*; there are differences of detail, but they do not require to be mentioned.

Rights retained by the quondam Thákur of Bárbóg.

There is a family in Bárbóg which at one time were Thákurs of the *kothi*, and are not yet entirely out of possession; their manor house is a very conspicuous object in the landscape, as most of the Thákur's houses are. The family was in full possession till about the beginning of this century, when Rája Bikrama Singh of Kulu picked a quarrel with the then Thákur, and resumed the cash, cloth and colts out of the items of revenue, leaving him only the grain item as a means of subsistence. This arrangement remained in force, though there is nothing to show that any Sikh or British official was aware of it, till shortly before the revision of the revenue assessment of 1891, when grain having risen in price, the landholders, by agreement with the heads of the family, converted the grain dues into cash, which has since been paid by each *jéola* in the proportions in which the grain used to be paid.* Each, moreover, continues to furnish a man for the two great *béstis*, that is, for sowing the barley and cutting the hay on the fields owned by the quondam Thákur. These fields were also in great part excused from bearing their share of the revenue of the *kothi* by the other landholders when they distributed it at Regular Settlement. This is all that remains to the present head of the family of its former privileges. He seems to be entitled to a position not unlike that of a *táluqdár* of a village in the plains.

Land held by the Gúru Ghantál monastery.

The big monastery of Gúru Ghantál, with its chapels of ease at Khóksar and Shánsha, holds a good deal of land in different *kothis* rent-free as endowment. More than half is held of the *gónpá* by *khang-ch'ungpa* tenants, who by way of rent only present annually some shoulders of mutton, pots of whisky, and plaited sandals, but are bound to perform certain fixed services, such as the cultivation of the rest of the monastery land, the sweeping of snow off the roof of the monastery in winter, the bringing in so many faggots for winter fuel, &c.

Rights in water in Láhul.

The small canals upon which cultivation in Láhul depends seem to have been always constructed and kept in repair entirely by the landholders of the villages which use them. They are considered therefore to be the property of the shareholders in the water, who cast lots every year to decide the rotation in which each man shall irrigate his fields. Each holding furnishes a man for repairs; fines are levied on absentees, and consumed in a

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*By each *jéola*, excepting those held by two families of *dethái*, or kinsmen of the Thákur.

common feast with the produce of the *yúrzhing* or canal field, if there is one. The general opinion is that no outsider can get a share of the water of a canal, except from the body of old shareholders. The State in a *khálsa kothí*, or the Thákur in a *jágír kothi*, could not give a share; practically, therefore, their power of improvement of the waste is limited unless a new canal can be made.

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LAND REVENUE.

Nature of rent or land-tax under the Rájás.

The whole of Láhul appears to have been at one time portioned out among a few petty barons or Thákurs, who were the lords of whom the villagers held their holdings. Four of these baronial families have survived up to the present day, two in full and two in partial possession of their estates; the rest are said to have been gradually extirpated by the Rájás of Kulu. Under the Rájás the Thákurs were allowed to exist supreme in their own estates, but paid a heavy annual tribute or *nazrána* for them in the shape of a certain number of ponies, pieces of cloth, etc. In the rest of the country, *i.e.*, the *khálsa* or royal *kothís*, the Rája took the place of the extinct Thákurs, and managed them through an official with the rank of a *wazír*. The Thákurs, with a following of their tenants, and one man for each holding in the royal *kothís*, were compelled to attend the Rája at his capital, Sultánpur, for the six winter months of the year, and do any service, menial or military, which might be committed to them. This was the origin of the present annual emigration of a very large part of the Láhul population to their winter quarters in Akhára, a suburb of Sultánpur. The *thál* or land-revenue of Láhul was taken in fixed items of cash, grain and cloth, levied at equal rates on all the *jéolás* in each *kothi*. This was the rule, but sometimes some small differences of rate prevailed between different villages owing to variations of soil or water-supply. Another item of revenue was the colts (*thúru* or *dúrtsa*); a filly belonged to the owner of the mare, but all colts born in Láhul went to the Rája in *khálsa*, and to the Thákur in *jágír kothís*.

Sikh revenue administration, and arrangements made at Summary and Regular Settlement.

When the Sikhs ousted the Rája of Kulu, they collected the cash and grain from the *khálsa kothís*, and the *nazrána* from the Thákurs as before; but on the pretence that they did not demand any service of either Thákur or landholder, they imposed an additional cess, under the name of *betangna* of Rs. 6 per *jéola* on every holding, whether in the *khálsa* or the *jágír kothís*. When three years later we took over the country from the Sikhs, we found it nominally assessed at Rs. 5,000, which included grazing dues on foreign sheep and fines, besides land-revenue, ex-

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Revenue.
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cluding the revenue of *jágir kothis*. This was reduced to Rs. 4,200 at once, next year to Rs 3,200, and at Regular Settlement to Rs. 2,150, of which Rs. 240 was tribute payable by the Thákurs, and Rs 1,910 regular land-revenue. When, however, this last sum came to be distributed by the people themselves over the *jéolás* of the *khálsa kothis* it proved to be in excess of the old fixed cash assessment, and the landholders were not apparently informed that the old grain assessment and other items were abolished. They, therefore, argued among themselves that the excess must be considered as part of the Sikh *betangna*, and distributed it equally on all *jéolás*, whether in *jágir* or *khálsa kothis*. In this way on account of this excess, a sum of Rs 150 out of Rs. 1,910 was made payable by Thákur, who raised the money and something to spare, by imposing a new cess on the *jéolas* in their *jágirs*. The *khálsa jéolás* paid each their old cash assessment, *plus* a rateable share of the rest of the excess. No notice was taken in practice of the *khewat* or rent-roll, which had been made out by the Tahsíldár of Kulu under Mr. Barnes' orders. All old cesses were lawfully enough collected, as before, in *jágir kothis*, and in *khálsa* the *negi* without authority maintained most of them as perquisites of his office. Mr. Barnes had appointed one *negi* for the whole of Láhul (in place of the *wazirs* of the Rájás) and one *lambardár* for each *kothi*. The *pachotra*, or fee ordinarily assigned to *lambardárs*, was divided between them and the *negi*. The first *negi* was a Brahman of Pattan. It is not surprising that the *khewat* was not accepted by the Láhulás, for it was in fact in every way a very inaccurate document, besides being in a form not easily to be understood by them. Mr. Barnes was never able to visit Láhul himself: two or three hill *patwáris*, under no supervision, were sent over the passes, and brought back to the Tahsíldár what purported to be appraisements of the arable lands held by the several landholders of each *kothi*. From them the *khewat* was made out at Sultánpur. The old cesses were maintained at first even in *khálsa kothis*. About the time when the original *negi* was dismissed and Thákur Tára Chand appointed in his stead, the grain dues ceased to be collected; but the *thúru* colts, and the *dhárkár* or *rig-gi-tal* (that is the rents of sheep-runs paid by Gaddís) still continued to go into the *negi's* pocket. In 1862 Mr. Lyall brought the facts to the notice of the Government. In the end the rents of the sheep-runs were formally granted for life to Tára Chand in recognition of his service. With regard to the colts no definite orders were given; but about 1868, when the Government directed the *negi* of Láhul to discontinue a certain tribute which the Láhulás had been in the custom of paying through him to the representative of the Maharája of Jammu in Ladák, Tára Chand, of his own

accord, remitted taking the colts in *khálsa kothis*, on the ground that he had only taken them hitherto as a set-off against the expenses of the tribute in question.

First revision of Settlement (1871).

At Revision of Settlement in 1871 the sum of Rs. 150, which had erroneously been made payable by the *jágír kothis*, was re-distributed over the *khálsa kothis*. It was also found necessary at revision to make a general re-distribution of the land revenue owing to alteration in holdings, but no increase or reduction was made in the amount of the *khálsa* land revenue. At Regular Settlement the actual revenue fixed, including the assessment of the *jágírs* and all assignments, amounted to Rs. 3,624. The revenue of the *jágírs* was collected by the *jágírdárs* partly in cash and partly in kind, and the value of the payments in kind was included in this sum. Land brought under cultivation subsequent to the Regular Settlement was in the *jágír kothis* assessed as it was broken up, and the revenue was collected by the *jágírdárs*. In the *khálsa kothis* such land was also assessed as it was brought under cultivation, but the revenue went to the common fund of the *kothi* instead of to Government, as it was considered that the assessment made at the Regular Settlement was fixed for the term of settlement. This was noted in the administration paper prepared at revision. The area brought under cultivation between Regular Settlement and Revision was 83 acres in cultivated land and 94 acres in hay fields, and owing to the enhancement of the revenue of the *jágír kothis* on this account, the actual revenue of the *wazíri* after revision was Rs. 3,744, an increase of Rs. 120.

Second revision of Settlement (1891).

On account of the further breaking up of the waste subsequent to 1871 and owing to the assessment of such of the new cultivation as lies within the *jágír kothis*, the revenue of the *wazíri* stood at Rs. 3,886, when re-assessment operations were begun in 1890. The produce of the area cultivated in that year amounted according to the prices and rates of yield given in the last chapter to Rs. 33,451 in value, of which the Government share at 22 per cent., as representing half the net assets of the proprietor, would be Rs. 7,359. The estimate of the Government share at 22 per cent. was made on the same data as in Kulu Proper. The half-net asset estimate distributed over the cultivated area would have given a uniform rate of Rs 2-8-0 per acre or considerably, more than the existing rate in the *jágír kothis*, and twice as much as the then rate in the *khálsa kothis*. But it was not the policy of Government to take a heavy increase " both for political reasons, and also with regard to the isolation of the country, the circumstances of the people, and the burdens of road-making and furnishing supplies and carriage imposed on

CHAP. III. Section C. — Second revision of Settlement (1891).

them." The standard rate assumed for assessment purposes was therefore Re. 1-12-0 only, though this was freely departed from by the Settlement Officer, being exceeded in the comparatively low-lying and fertile villages, but not reached in the higher and colder hamlets. The application of the standard rate would have given a revenue of Rs. 5,152 : the revenue actually fixed was Rs 4,916.

Excluding the three *jágír kothís* the area of the cultivation of Láhul was found to be 1,966 acres, of which the new assessment was Rs. 3,024 (an increase of 22¼ per cent., on Rs. 2,473, the previous revenue of the *khálsa kothís* , including assignments, and giving an incidence of Re. 1-8-7 per acre. New cultivation continued as formerly to pay revenue to the *jágírdárs* in *jágír kothís,* and to the *kothi* common fund in *khálsa kothís.* In the *jágír kothís* no alteration was made in the assessment of the revenue-paying land which was already sufficiently high. The *jágírdárs* readily acquiesced in this arrangement, and probably were glad that no reduction was proposed. Lands within the *jágírs,* which are the private property of the *jágírdárs*, and which are either cultivated by them or assigned by them as service grants to their ploughmen or retainers, bore no revenue on the papers, and a nominal assessment was put on these lands at the rates at which other land in the same villages with them was assessed. The object of this was to show the true value of the *jágírs,* and to ensure that the proper amount due on account of cesses was realized from the *jágírdár.* It was not considered necessary to submit proposals for the commutation into cash of the payment in kind realized by the *jágírdárs* who are the superior proprietors of their *jágírs.* Payment in kind was considered to be as convenient to the proprietors as to the *jágírdárs*, on the ground that it was not always possible for the former to convert their grain and *ghi* into cash.

The cesses levied in Láhul in addition to the land revenue were :—

	Per cent. Rs.	A.	P.
Lambardárs' fees	5	0	0
Patwár Cess	3	2	0
Local Rate	9	8	6

Third revision of Settlement (1912).

For the third revision of settlement the maps and records were revised in July and August 1912 by a small staff of *patwárís* under two *kánúngos.* A general remeasurement was not attempted but all boundaries of old cultivation were rechained and doubtful calculations tested by measurement on the spot and

corrected where necessary. The work was checked by the Settlement Officer in September and assessment was completed in October.

Third revision of Settlement (1912).

The value of the gross produce of the *waziri* calculated by applying the rates of yield and prices already mentioned to the area harvested in 1912 was estimated to be Rs. 51,637 and the share to which Government was entitled (22 per cent., as assumed at the previous revision) amounted therefore to Rs. 11,360 or Rs. 3-15-0 per acre of cropped land.

The Settlement Officer reported that while the increasing wealth of the Punjab was doubtless reflected in a general rise in the standard of living in Láhul, and money circulated more freely and profits from trade and labour were higher than they used to be, yet in many respects the *waziri* was no better off than it was twenty years before. The great rise in prices was a reason for leniency rather than enhancement in a country where a large portion of the food consumed was imported. The profits of the carrying trade had decreased, and *lugri*-brewing in Kulu Proper, formerly a significant source of income in Láhul, had ceased to be of appreciable importance to the *waziri*.

On the other hand, an enhancement of the land revenue in *khálsa kothis* appeared to be justified by the fact that the existing demand was not only far less than the amount legally due to Government but was also light in comparison with the rates paid in the *jágir kothis* where, in addition to grain and cash, customary service in many forms is rigorously exacted by the *jágirdárs* from the inferior proprietors.

Mr. Coldstream's conclusions were that the *jágir kothis* were already paying as high a revenue as could fairly be taken, the rights of *jágirdárs* to take a *táluqdári* fee over and above the land revenue being admitted : that the majority of the people of the *waziri*, whether traders or not, were without surplus cash : and that a very moderate enhancement of the *khálsa* land revenue would meet the ends of justice in assessment.

Assessment of *khálsa kothis*.

For the assessment of the *khálsa kothis*, a guiding *táluqa* rate of Rs. 2 per food-growing acre was adopted. This rate was not justified by any calculation of the value of the produce grown, but was fixed as apparently a fair rate in consideration of the circumstances of the people and the country, and one which, applied to the cultivated area, would bring out a fair demand for the *waziri*. But the majority of the hamlets were found to be so small and in many the discrepancies between the old and new records in respect of area were found to be so great, that an acreage rate was not a uniformly useful guide and the assessments were

CHAP. III Section C.

Assessment of Khálsa kothis.

more by rule of thumb than by adherence to statistics. No separate assessment was imposed on account of hayfields, from which no direct profit is derived by the agriculturist. The result of the assessment of the *khálsa kothis* was an enhancement of their revenue by 22·26 per cent. from Rs. 3,024 to Rs. 3,697. The demand proposed for Pattan, which worked out at Re. 1-8-0 per acre, was at first sight remarkably lenient: but the tract was lightly assessed before, and lies off the trade-route: the higher hamlets are also very poor. The incidence of the revenue announced for the *khálsa kothis* on the cultivated (food-growing) area was Re. 1-13-0 per acre. It amounted to Rs. 90·75 per cent. of the demand by the suggested *táluqa* rate and 45 per cent. of the estimated "half net assets."

Assessment of jágir kothis in 1912.

The assessment of the *jágir kothis* in 1891 had been in great part only nominal. It included a valuation of the grain and butter taken by the *jágirdárs* and also the nominal demand due from holdings held rent free. But the assessment recorded in the Settlement Officer's order was not put into practice by the *jágirdárs*. In some instances the nominal assessment was actually added to the revenue already taken from the *yúlpá*; in other cases the nominal demand in one hamlet was actually collected in another. The *jágirdárs* kept no accounts, could not say what revenue was paid by each hamlet, and could not distinguish between payments paid on account of released *begár* and on account of land revenue. The people expressed a strong desire in *jágir kothis* that the revenue taken in kind from them should be commuted into cash. Payment in kind meant that they had to buy grain for food in Kulu at high prices. The collection of *jágir* revenue in kind had, moreover, been sanctioned on the clear understanding that it was convenient both to the Thákurs and to the *zamíndárs* and that the former would always consent to commutation into cash at the rate of 26 seers of barley and 2 seers of butter per rupee. These conditions prevailed no longer, and cash was not always accepted by the *jágirdár*. Finally after discussions at public meetings, both sides agreed that the revenue in kind should be commuted into cash at a new rate of 16 seers of barley and 4 *kacha* seers of butter per rupee, that is to say at rates 25 per cent. higher than those assumed by the Settlement Officer in 1891. The new demand, then, consists of the cash revenue formerly taken from *yúlpa*, an assessment in cash on account of the barley and butter, calculated at the rates mentioned above, and a nominal assessment imposed on holdings belonging to the *jágirdárs* which actually pay no revenue. The last item was calculated by applying to the released area in a hamlet the rate per acre at which the *yúlpa* of the hamlet pay revenue for

their land. The results of the new revision were :—

Assessment of *jágír kothis* in 1912.

		1891	1912
Kólong	...	760	762
Gúngrang	...	688	736
Góndhla	...	354	470.

The *jágírdár* of Kólong had already taken almost all his revenue in cash. The incidence of the new revenue on the cultivated fields of the *jágír kothis* (excluding hay-fields) was Rs. 2-7-7 per acre.

Re-assessment of the *wazíri.*

The distribution of the revenue within hamlets is by a uniform rate per *bigah* on the cultivated land, a small rate being first put upon hay fields as was done in 1891. The revenue of Láhul like that of Spiti is paid in the autumn and is part of the *kharíf* revenue of the sub-division. Mr. Coldstream's assessment was sanctioned with effect from the *kharíf* of 1913. The demand for the *wazíri* amounts to Rs. 5,762 or 19 per cent. more than the revenue sanctioned in 1891, is equivalent to half the full Government share of "half the net-assets," and falls on the food-growing area with an incidence of Rs. 2-0-1 per acre.

Cesses in 1912.

The local rate amounts to Rs. 10-6-8 of the land revenue and the *lambardári* cess of 5 per cent. is appropriated altogether by the *lambardárs*, there being no *negi's* cess.

Táluqdári dues.

In 1891 Government had decided that out of the *jágír* revenue 15 per cent. should be regarded as *táluqdári* dues, and Mr. Diack had proposed that the cesses due on the remaining 85 per cent. should be paid by the inferior proprietors. This proposal was not, however, enforced and the *jágírdárs* continued to pay cesses on the whole *jágír* revenue until the last revision of settlement when effect was given to it in the new record of rights.

Administration paper.

The new *wájib-ul-arz* does not differ materially from the old in *khálsa kothis* except that the provisions regarding *begár* have been brought into conformity with present practice. The *wájib-ul-arz* of the *jágír kothis* describes the various forms of service taken by the Thákurs from the inferior proprietors. Here a change was made to record the agreement by all the *jágírdárs* to waive their right to appropriate the colts foaled in their *jágírs* and to accept instead a payment of Rs. 8 from the owner.

Sheep-runs.

The present arrangements regarding sheep-runs are described in Chapter II-A, page 224.

SECTION D.

MISCELLANEOUS REVENUE.

CHAP. III.
Section H.
Tirni.

The collection of *tirni* or fees for grazing has been described in Chapter II-A. Of the sum realised, one-quarter is retained by the Thákur of Láhul, and the rest, which amounted in 1916 to Rs. 1,271, is credited to miscellaneous revenue.

There is no excise control in Láhul. Local cesses are at the same rate as in Kulu, namely Rs. 1[illegible]-6-8 per cent. of the land revenue. The stamp revenue is insignificant.

SECTION E.

Local or Municipal government.

There is no Local or Municipal government.

SECTION F.

PUBLIC WORKS.

Public Works.

The charge of the Public Works Department in Láhul has been described in Part II, Chapter III-F. (Kulu and Saráj), and in Part III, Chapter II-G. (Láhul). The wood for the bridges and some of the materials for the bungalows had to be brought all the way from Kulu, and the difficulty of constructing and maintaining roads, rest-houses and sarais in this remote tract is very great. Avalanches in the spring do much damage, and the transport of materials is very costly : the local labour supply is excellent.

SECTION G.

ARMY.

Army.

There is no army in Láhul, and recruiting has so far only attracted coolies, who were obtained for the Lhasa Expedition as well as for the War in Mesopotamia. In 1916, 112 men went with Thákur Amar Chand to Basra and Nasiriyeh, and were most favourably reported on by the Officer Commanding the 6th Labour Corps. He was anxious to obtain more men of the same excellent stamp.

SECTION H.

POLICE AND JAILS.

Police and Jails.

There are no police or jails in Láhul and the Thákur arranges for the safe custody of prisoners.

SECTION I.

EDUCATION AND LITERACY.

CHAP. III. Section J. Education.

There is only one new primary school besides the Mission Schools at Kyélang and Chot, which have been described, and the monastery schools. The latter are not officially recognised, but they have an educating influence such as was never attempted by the Brahmans in Kulu. The result is that most Láhulás can read and write Tibetan and their intelligence is much greater than that of the Kulu people. It is a remarkable fact that the Tibetan language and script is winning in Láhul against the Indian, at the same time that Hinduism is progressing against Buddhism.

A District Board School has now been opened at Lód in Pattan, but it remains to be seen whether it will share the fate of previous efforts to establish a primary school in Láhul or not. The first requisite seems to be a Láhula school-master, and none such is at present forthcomirg.

SECTION J.

MEDICAL.

Medical.

There is no dispensary in Láhul except a small one kept up by the Moravian Mission, which has been described in Chapter I.-C. There is some prospect however of the establishment of a regular medical institution and one of the younger members of the Kólong family will, it is hoped, qualify himself to manage it.

Vaccination is not compulsory, and is appreciated.

Village sanitation is not good: the inhabitants have yet to be educated in this respect, but there are special difficulties in the winter when the country is under deep snow.

PART IV.

SPITI.

CHAPTER I.—Descriptive.

SECTION A.

PHYSICAL ASPECTS.

Name in vernacular.

The name Spiti, locally pronounced Piti, is a Tibetan word, denoting "middle province," and describes the position of the country placed between British India, Kashmír, Tibet and Bashahr.

Position and area.

Spiti lies east of Láhul and Kulu at the extreme north-eastern corner of the Punjab, between N. latitude 31°42′ and 33,° and E. longitude 77° 37′ and 78° 35′. Geologically it is connected with its northern, eastern, and southern neighbours, with which are also the easiest lines of communication and ties of religion, race and trade : politically it is united with its western neighbours. But it has always been a remote district, difficult of approach and very much left to itself. In area it measures 2,931 square miles.

BOUNDARIES AND CONFIGURATION.

Boundaries.

Except for a few miles of uninhabited river valleys in the north, and north-east, the boundaries lie along the crests of very lofty mountain ranges, pierced only at the south-east corner by the narrow gorge of the Spiti river. The country thus stands back to back against Láhul. The mountains belong to the two ranges known as the Main (or Western Great) Himalaya and the Mid-Himalaya, with connecting lines of heights. The western boundary is some 80 miles long, and begins on the north with the junction between the Serchu and Lingti rivers, follows the former river up to its source ten miles southwards in the Main Himalaya, and proceeds along the crest of that range for a similar distance in the same direction till it meets the Kúnzom range. The Main Himalaya here turns south-eastwards across Spiti, separating the waste tract of Tsárab on the north from the Spiti river valley. The Kúnzom range runs roughly southwards for 30 miles till it meets the Mid Himalaya, which comes by way of the Rotang and Hamta Passes from the north-west. The Kúnzom Pass 15,000 feet high is the main avenue of approach to Spiti from the remaining parts of Kángra District. Down to the junction of these ranges the boundary separates Spiti from Láhul. Southwards of it, the Mid Himalaya runs south separating Rúpi

No. 17. Nono of Spiti (second from right) with his clerk and two head men.

and Saráj from Spiti, till it meets the Sri Kandh range. The Pin-Párbati Pass is the only one on this length and is hardly ever attempted. The Sri Kandh Range runs westwards through Saráj and eastwards with a slightly northern inclination as the southern boundary of Spiti. The length of this range is about 50 miles, and it is crossed by four passes, three of which are seldom used, while the fourth is easy and provides the main southern approach to Spiti. South of it lies Bashahr State. At its eastern extremity the boundary goes down by a small tributary to the Spiti river.

Boundaries.

On the east or left bank of the Spiti river the Main Himalaya is again met, having come by an immense curve from the north-west for 25 miles, then eastwards for about the same distance and nearly south for over 30 miles. The Ngari-Khorsum province of Western Tibet lies on the east side of this range from the Spiti river to the point where the range turns south. There is no pass on this length of 30 miles, and the road to Tibet lies either along the Spiti river or further north *viá* Hanlé. At the north-eastern corner of Spiti the Paraichu river runs into Hanlé, a province of Ladák in Kashmír territory, from the Main Himalaya. This river starts from the Tágling and Párang Passes and runs north-east leaving Spiti at Norbu Sumdo and eventually curving southwards into the Spiti river, through Ngari-Khorsum. The boundary crosses it to a high range of hills which forms the northern frontier of Spiti, dividing Tsárab from Rúbchu. This range has one pass, the Pángmo La, and runs north-westwards to the junction of the Tsárab and Lingti rivers. From the south-eastern corner of Spiti to the extreme northern point is some 90 miles

Configuration.

The country is thus surrounded by enormous mountain ranges and traversed by the main line of the Himalaya. The drainage of the northern waste of Tsárab runs into the Indus, while the main Spiti valley (with its tributary on the north-east) joins the Sutlej. The average elevation of the mountain ranges is over 18,000 feet and they lie somewhat higher as a rule than those of Láhul. The valleys are some two thousand feet higher than the Chandra and Bhága. Tsárab has a minimum elevation of 14,000 feet and the lowest parts of the Spiti valley are considerably more than 11,000 feet above the sea. The Main Himalaya contains one peak, east of the Párang La, which is over 23,000 feet high, and the Mánérang mountain on the south stands at 21,646 feet. The subsidiary lines of hills running down into the valleys are frequently over 17,000 feet in height.

RIVER SYSTEM.

River system.

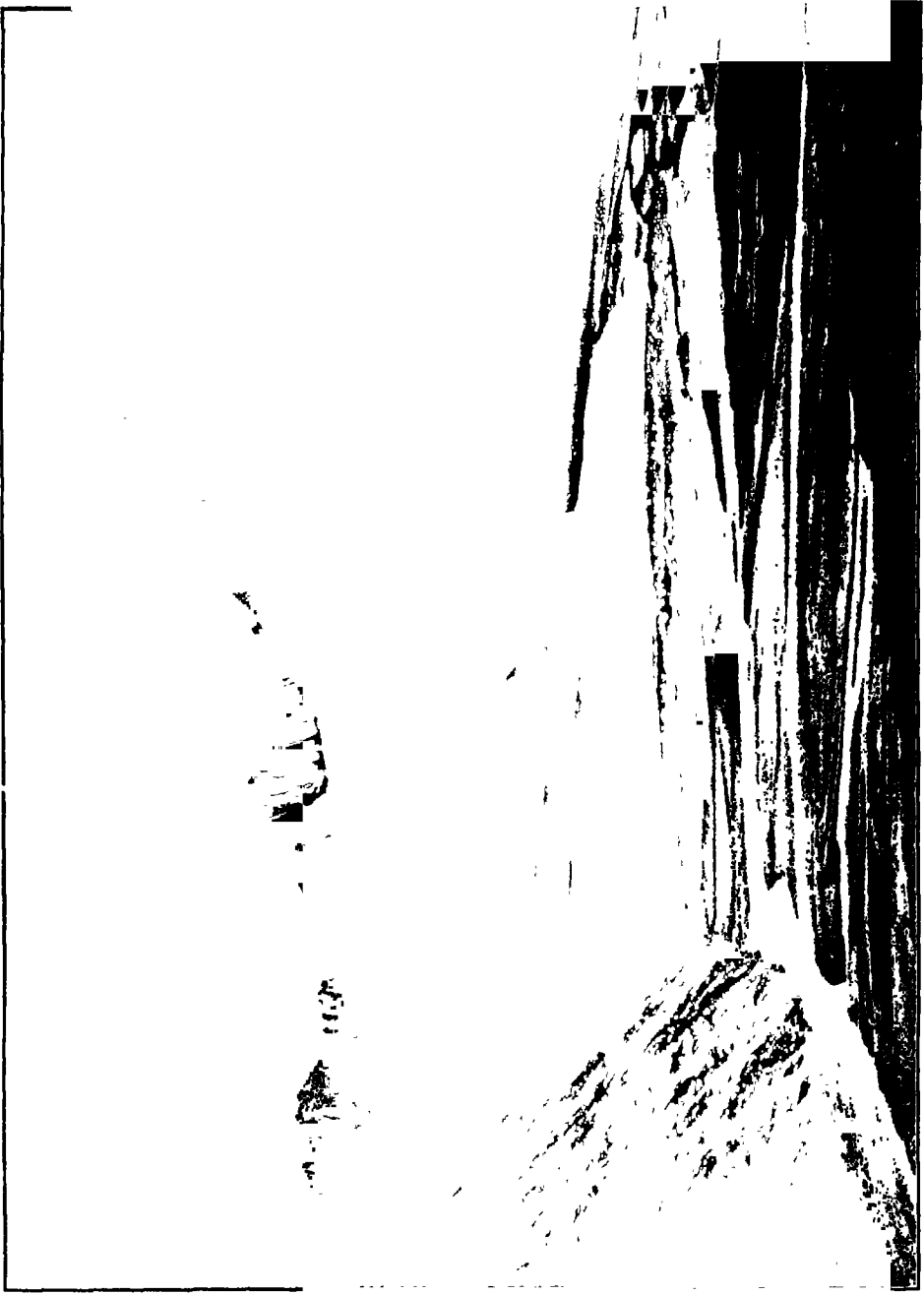
The Tsárab river in the north runs for about thirty miles northwards before joining the Lingti river, and entering

CHAP. I. Section A.

River system.

Zangskar. The main Spiti river and its tributaries are grouped together rather symmetrically, like a tree leaning towards the north-west, the lower branches being larger and the whole tapering to the top. The length of the main stream from the corner formed by the junction of the Kúnzom Range with the Main Himalaya to its exit from Spiti on the south-east is about 70 miles. The larger tributaries lie on the right, or western bank, and flow from the Mid Himalaya, which runs at some distance from the Spiti river. The main stream of the Pín valley is about 30 miles long: the Gyundi and Rátang on this bank are about 20 miles in length. On the other side the Lingti has a length of over 25 miles, with numerous affluents and the other large streams on the left bank of the Spiti are the Sámpa and the Shila. The Spiti rivers are all violent torrents, which in the summer rise every day with the snow-melt, subsiding to a comparatively low level when the frosts at night seal their sources in the high-lying glaciers. The water of these streams, heavily charged with silt, is turbid and yellow. The flow is deep only in the narrow gorges, being usually distributed over broad channels. The current is always very strong, and in the latter part of the day renders fording perilous if not quite impossible: the streams are then full and the ominous sound may be heard of boulders knocking one against the other. The deepening of the beds of the rivers in accumulations of *débris* or in solid rock has rendered irrigation from the larger streams a matter beyond the resources of the people, who have to depend on the smaller torrents which issue from the glaciers and hillsides nearer the main river.

The main valley was once a gently sloping plain, a mile or two wide, but the central portion has now been carried away by the river which flows in rapid shallow streams scattered over a very broad bed shut in by perpendicular cliffs: the side portions of the plain stand up as plateaux above these cliffs and on them lie the villages and fields. From the plateaux rise long steep slopes of *débris* sometimes several hundred feet in height which have come down from the great walls of rock and jagged ridges which end the view overhead. These deep accumulations of broken rock and stones absorb much of the moisture which is so much needed in the brown bare plains below them.

The larger tributaries of the Spiti flow through valleys which sometimes resemble its own, but shortly before they join it are forced into narrow chasms in the rocky heights which rise on either side of the main river. The depth of these cuttings is enormous; in the Shila river the walls of the canyon can hardly be less than 2,000 feet high. The Pín gorge is several

miles in length, and similar chasms occur on the Sampa river near Kyfbar and the Lingti. In a nearly timberless country this narrowing of cross drainages on the main routes is a great convenience for bridge making.

CHAP. I Section A.

River system.

SCENERY.

Scenery.

The aspect of the main valley in the summer is bare and conveys an impression of desolate grandeur, but in spite of the utter want of verdure, there is a magnificent beauty in the scenery: the hills near at hand have very quaint and picturesque outlines, and their scarped sides show a strange variety of strata, each with a different tint of colour; above them a glimpse is caught of some snowy peak standing back against a very blue sky; in front are the bold sweeps of the river and the cliffs, supporting the plateaux, upon which, at long distances, the white houses and green fields of the villages are conspicuous. All this, seen through an excessively clear and pure atmosphere, makes as pretty a picture as is possible in the absence of verdure and blue water. Except when the streams are clear in the autumn, the only blue water in Spiti is contained in one or two lakes, to see which requires a long climb out of the valley; there is a small one above Ḍángkar, and another of considerable size at the foot of the Mánérang Pass.

The valleys of the right bank are precipitous and the ridges rise sharply into ragged crests. The Pín valley is more absolutely bare of tree or bush than any other part of Spiti, but contains more grass than in the main valley, probably owing to a greater rainfall in Pín.

On the west bank of the main river, behind the heights which flank the valley, lie rolling downs covered with herbage on which the yaks, ponies, and flocks of the people wax fat in the summer, and the barhal and ibex flourish. With the grand range of the Main Himalaya in the back-ground, this great green sweep of country affords just that relief from closed views of mountain walls which is needed after long and toilsome travelling in narrow valleys. The dry exhilarating air of this high and nearly rainless country would be the very best cure for jaded workers in the plains, if only it were more accessible.

GEOLOGY.

General description.

It is difficult to describe an essentially scientific subject in a few words intended for lay consumption, but it may be said that the geological importance of Spiti lies in the fact that here is an almost unbroken series of marine deposits, dating from the earliest era in which animal life is known to have occurred on the earth to one of the latest geological periods. These deposits

CHAP. I. Section A.

General description.

are no less than twenty thousand feet in thickness, and have been sub-divided into a number of systems, corresponding more or less with those of the European scale. Originally formed in horizontal layers one above the other at the bottom of the sea, the marine rocks of Spiti are now seen at altitudes ranging from twelve to over twenty thousand feet above sea-level In the displacements caused by the rise of the Himalaya Mountains, the oldest deposits, which were at one time twenty thousand feet below the bottom of the sea, were carried up till they appear in places at higher altitudes than the most recent marine system. Details regarding the geology of Spiti, with a map and diagrams showing the different formations, are very clearly shown in a Sketch of the Geography and Geology of the Himalaya Mountains and Tibet, published in 1908 by the Indian Government, and in Volume XXXVI of the Memoirs of the Geological Survey of India, which also contains an extensive bibliography of the subject. There is told the story of the great primeval sea, called the Tethys, which stretched over Spiti in days when that country lay on the northern shore of India, one of the oldest continents of the world. We read there how this water was at first not connected with the Palæozoic Sea of Europe, but later spread westwards to that continent; how the floor of the sea in Spiti rose and fell, the changes between shallow and deep water deposits being clearly traceable; how at one era the dry land appeared for so long a time that, by the action of weather and of rivers, there occurred denudation of beds some thousands of feet in thickness. Finally came the great upheaval which laid bare this wonderful chapter of earth-history from beginning to end.

Geological Summary.

The following summary has been supplied by the Geological Survey of India :—

The northern division of the Himalayan rocks, known as the Tibetan zone, extends through Kanáwar and Spiti into Láhul, and affords an almost unbroken sequence of sedimentary deposits ranging from Cambrian to Cretaceous. The oldest beds are slates and quartzites for the most part unfossiliferous, but containing in the higher beds trilobites and other fossils of Middle and Upper Cambrian age. These are overlain, unconformably, by conglomerate, followed by a great mass of red quartzite, believed to be of Lower Silurian age, and passing up into limestone and marl with Silurian fossils (trilobites, corals, etc.). The limestone gradually gives place to a white quartzite which is one of the most characteristic horizons of the Himalayas. Except in Kanáwar and Upper Spiti the quartzite is usually overlain by beds of Upper Permian age. Next in order is a conglomerate of variable thickness, overlain by calcareous sand-

Geological Summary.

stone and a bed of dark micaceous shale representing the Permian. The uppermost bed, known as the "Productus Shales," is found throughout the Himalayas and contains Upper Permian brachiopods and ammonites. The latter are especially interesting, as they are closely allied to species (*Xenapis carbonaria* and *Cyclolobus oldhami*) from the Upper Productus Limestone of the Salt Range. Above these shales is a thin shaly band with ammonites, known as the Otoceras Beds, which passes into a vast thickness of limestone, intercalated by shale, and representing the whole of the Trias. and the Lower, and probably the Middle, Jurassic. Fossils are numerous throughout, and representatives of all sub-divisions in the Alpine Trias have been recognised. The limestones are succeeded by the well-known Spiti Shales, famous for their ammonites. They are of Upper Jurassic age, and are overlain by the Giumal (Giungul) Sandstone and Chikkim limestone and shales, representing the Cretaceous system.

Practically the whole of Spiti and the north-eastern portion of Láhul are formed of the rocks described above. None of them are found in Kulu. Similarly the rocks of the central zone which form the major portion of Kulu and Láhul are only to be met with, in Spiti, in a small area on the south-western border.

The plateaux.

The plateaux on either side of the river seem to have been formed by deposits of the river itself, which, while engaged in making its gradient gentler by piling up *débris* in its lower reaches, was compelled to plough through them again by the continual rise of its watershed, which tilted up the higher courses of the river and its affluents.

Economic minerals.

The country contains large quantities of gypsum and limestone, with some slate, but hitherto the remoteness of the tract has robbed these deposits of all commercial value. The absence of fuel also makes the local use of limestone impossible for the production of lime.

BOTANY.

Botany.

There has been no scientific account as yet made out of the botany of Spiti. The vegetation is extremely scanty in the main valley owing to the very light rainfall. The flora resembles that of Láhul on a much more exiguous scale. There are, however, many more trees than existed at the time when this Gazetteer was first compiled : willows are found cultivated at all the villages from Losar, which is the highest of all, downwards. Poplars begin from Kyomo and some are as large as a shisham. Dwarf willows grow by the high river bank without irrigation in

CHAP. I. Section A.

Botany.

extremely dry situations. There can be no doubt that cultivation of willows and poplars might be very much extended. A great many kinds of wild grasses and nutritious fodder plants grow on the edges of the water-courses and fields. These are generally wild, but a sort of lucerne is said to have been introduced from Ladák. In the higher pastures grow the wild pea and thistle with a strong-smelling plant called *yeldang* (*ebbang* below Dángkar): all these afford very rich food for cattle and sheep. Juniper occurs scantily above Dángkar and more thickly below that village: birch is found lower down below Máne. A furze grows thickly over some parts of the country and is used as fuel. The vernacular names are as follows:—

Dwarf willow	...	chángma.
Large willow	...	gyál chang.
Poplar...	...	mágal.
Birch ...	...	tágpa.
Furze ...	...	ḍáma.
Juniper	...	shugpa.
Wild pea	...	tsírí.
Thistle...	...	túlse.
Lucerne	...	búg-súb.

FAUNA.

Fauna.

There are few species of wild animals in Spiti, but ibex and barhal are found in large numbers on the more remote hillsides. Very large heads are not often shot, however, in spite of the fact that the Spiti people are not *shikárís*. The shooting is regulated by the Kulu rules—*vide* page 12.

CLIMATE.

Climate.

The seasons in Spiti correspond generally with those of Láhul, though the spring is somewhat later, and the winter of longer duration. The mean elevation of the villages is considerably higher than in Láhul, averaging 12,000 feet or over, and rising as high as 14,000 feet. Snow begins to fall in December, and remains on the ground until the end of April, but seldom exceeds a depth of 2½ feet, which is less than in Láhul. The rivers almost cease to run in the winter and are bridged over with snow. The cold is very severe, and is aggravated by violent and piercing winds. Slight showers of rain fall in July and August, though the district is beyond the regular influence of the monsoon. Severe frosts set in before the close of September. In the summer the sun is very powerful in this treeless and shadeless tract, and the temperature in the sun's rays at midday is very high. The

mean temperature of the upper Spiti Valley is given in Messrs. Schlagintweit's tables as follows :—

CHAP. I. Section B. — Climate.

January	17°
April	38°
July	60°
Autumn	39°
Year	39·4°

The climate is remarkably healthy.

EARTHQUAKES AND FLOODS.

The effects of the earthquake of April 5, 1905, have been described on pages 16 and 19. There are very few earthquakes in this *wazíri* and owing to the absence of rainfall there are no floods. The daily rise in summer of the waters of the rivers has been described, and is responsible for several deaths by drowning almost every year, but no extensive inundations occur.

SECTION B.

HISTORY.

Early Hindu Rájás.

In very early times Spiti was probably ruled by a Hindu dynasty of Rájás, bearing the suffix of Sena. One of the old Hindu Rájás was possibly Rája Samudra Sena who presented to the temple of Paras Rám at Nirmand in Saráj its copper plate grant and founded that institution. There seems to be nothing improbable in this and we are told in the *Vansávali* of Kulu that one of the later Rájás, Rájendar Sen, invaded Kulu and made it tributary in the reign of Rudar Pál. Kulu paid tribute to Spiti for two reigns, until Parsidh Pál, by a victory over Rája Chet Sen of Spiti in battle near the Rotang Pass, freed his country.

Tibetan rule established.

Soon afterwards the Hindu kingdom of Spiti was overthrown by a Tibetan invasion from Ladák (Tibetan *Ladág*). A *jágír* was granted to Chet Sen's son and three villages of Spiti were given to Rája Sansár Pál of Kulu for his assistance. This was approximately in the beginning of the seventh century A.D. Spiti then passed under Tibetan rule and seems to have formed a province of the kingdom of Ladák in the 10th century.

Ladáki rule.

Western Tibet was then conquered by Skyid lde nyima gon (grandson of Langdarma, the Tibetan King who persecuted Buddhism) who founded the new Ladák kingdom, and on his death about 1,000 A.D. his dominions were divided among his three sons, the youngest Lde tsug gon receiving, with other parts, the

CHAP. I. Section B.

Ladákí rule.

countries of Zangskar, Láhul and Spiti. We may, therefore, conclude that Spiti had been under Tibetan rule from the overthrow of the Hindu dynasty down to that time, and it probably remained a part of Ladák after the consolidation of that kingdom under Lha chen Utpala (1125-50 A. D.), who conquered Láhul and Kulu and made them tributary.

Connection with Gúgé.

It is difficult to follow Spiti history with the data at our disposal, but it seems clear that Spiti was under Ladák in the reign of Jamyang Namgyál (1560—90) and probably became independent on the conquest of Ladák by the Báltís, but it was recovered by Sénggé Namgyál (1590—1620). On his death, it passed to his youngest son Déchog Namgyál (1620—40), but still under vassalage to Ladák. In the reign of Délegs Namgyál, son of Deldan, and grandson of Sénggé Namgyál (1640—80) it is said by Egerton that there was war with Gúgé: the latter state asked the help of the ruler of Central Tibet, and these allies being victorious, Spiti with Gúgé came under Lhása. Délegs then contracted a marriage with the daughter of the Tibetan commander and obtained Spiti in dowry. This event, if authentic, must have occurred about 1680 A. D. From this time Spiti seems to have been attached to Ladák.

Invasion by Kulu.

Some time after 1688 Spiti was invaded by Mán Singh of Kulu who exacted tribute, probably merely a *nazarána*. The connection of Spiti with Kulu was probably of a very loose and merely nominal character, and it is possible that tribute was paid both to Kulu and to Ladák.

Spiti remained a province of Ladák, but from its remote and inaccessible situation the country was always left very much to govern itself. An official was sent from Leh as *gar-pon* or governor, but he generally disappeared after visits paid at harvest time, and left the real administration to be carried on by the *gyálpo* and other hereditary officers of Spiti, who again were completely controlled by the parliament of *gádpo ch'enmo* or headmen of *kothís* (*ngábchu* *) and *gádpo ch'úngun* or headmen of villages (*yul*). This is the state of affairs described in Moorcroft's and Gerard's travels as existing nearly a hundred years ago, and, with the exception of the *garpon*, affairs are managed in much the same way at the present day. Spiti is no longer liable to forays as it was then. Gerard mentions that in A. D. 1776, or thereabouts, the Bashahrís held the fort of Dángkar for two years; and in Moorcroft's Travels Mr. Trebeck gives an account of a raid which had been made just before his visit by a large body of armed men from Kulu. The Spiti people are not

*This word literally means fifty.

a warlike race, and paid a small tribute to all the surrounding States by way of blackmail to escape being plundered. After the Sikhs had annexed Kulu in 1841, they sent up a force to plunder Spiti. The Spiti men, according to their usual tactics, retreated into the high uplands, leaving their houses in the valley and the monasteries to be plundered and burnt. A few straggling plunderers from the Sikh force who ventured up too high were surprised and killed, and a few men were wounded on either side in skirmishes. The Sikhs retired when they had got all the plunder they could, and did not attempt to annex the country to Kulu or separate it from Ladák. That was not done till A. D. 1846, when on the cession of the trans-Sutlej States after the first Sikh war, the British Government, with the object of securing a road to the wool districts of the Cháng Tháng, added Spiti to Kulu, and gave the Jammu Mahárája other territory in exchange. In the autumn of the same year General (then Captain) Cunningham and Mr. Vans-Agnew fixed the boundary between Spiti and Ladák and Chinese Tibet. For the first three years the collection of revenue was farmed to Mansukh Dás, *wazír* of the Rája of Bashahr. In the autumn of 1849, Major Hay, Assistant Commissioner of Kulu, went to Spiti and took over charge. He spent the best part of the winter there, and submitted a valuable report, which was printed by order of Government: in it and in the account of a tour in Spiti, published by Mr. Egerton, Deputy Commissioner of Kángra in 1864, a very full description of the country will be found.

Invasion by Sikhs.

British rule.

SECTION C.

POPULATION.

Density and growth of the population.

The density of the population over the whole of the *wazíri* is 1·23 per square mile, and over the cultivated portion 979 or about the same as in the *wazíris* of Kulu proper.

The returns have been as follows :—

1868.	1881.	1891.	1910.
2,272	2,862	3,548	3,629

The increase since 1891 has been 2 per cent. The 1910 census was made in September when fewer persons are absent from their homes than at other times: the census of 1891 was also a complete one. In 1881 a number of absentees caused a diminution of the figures: both in that year and in 1891 the

CHAP. I. Section C.

Density and growth of the population.

enumeration was taken in the early summer, but in 1881 many persons had left the valley before the counting began. The very slight increase in the population is due to the peculiar social customs of the country by which only the eldest son of the family is allowed to marry, and all the youngest sons become monks, who are celibate in all but one of the five monasteries of Spiti.

Distribution of the population.

There are no returns available for 1910 regarding the distribution by families and houses: it is improbable, however, that much change has occurred on the figures for 1891, which were as follows:—

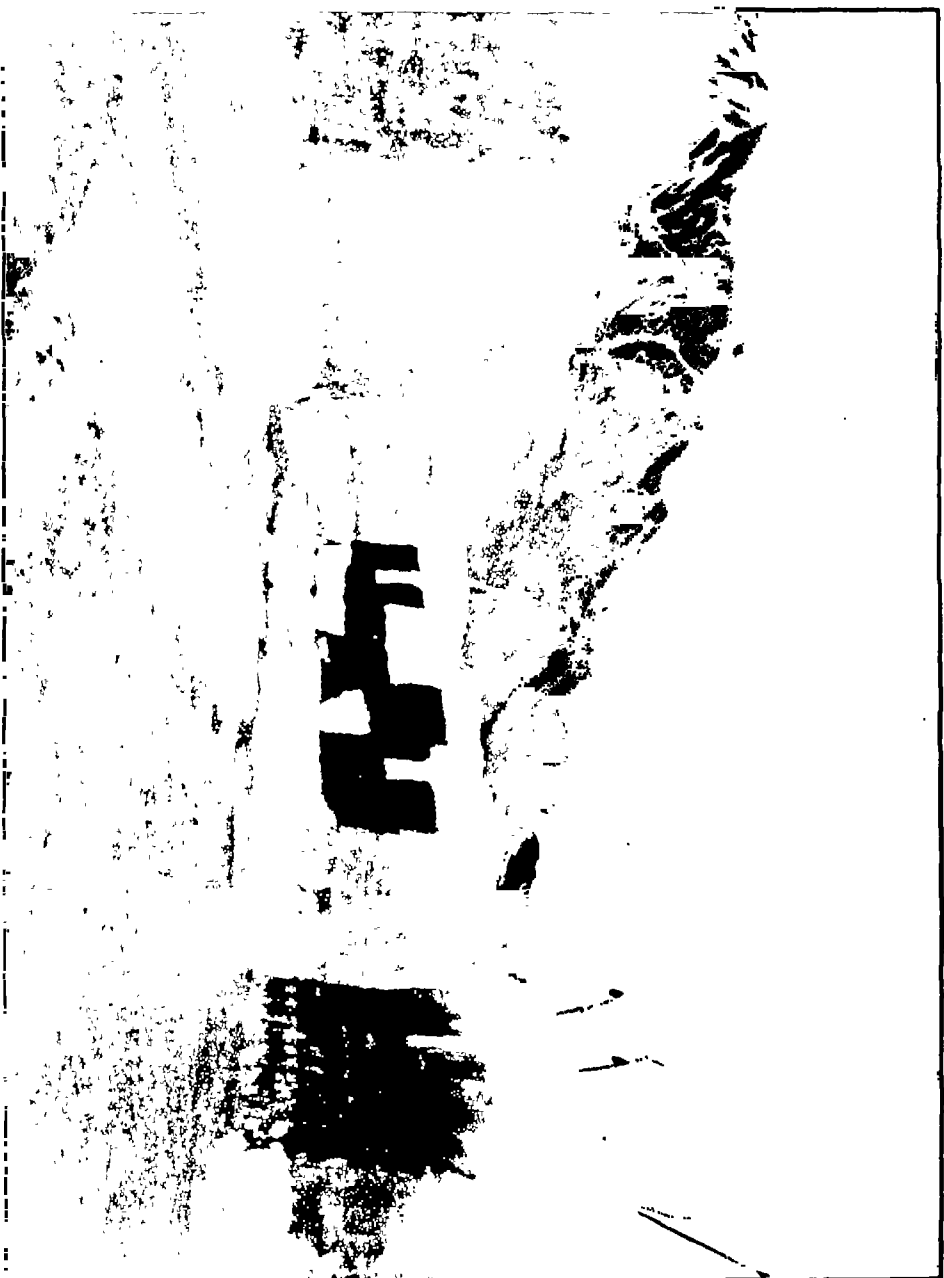
Families per 100 inhabited houses.	Persons per 100 inhabited houses.	Persons per 100 families.
107	390	364

This is a smaller number of souls per house and family than is recorded for any other portion of the Punjab, a fact which is due to the system of primogeniture prevailing in Spiti. The proportion of women to men is 103: 100. There are large numbers of unmarried women as well as men and there are many illegitimate children.

VILLAGES.

Villages.

There are no towns in Spiti, but some of the hamlets are considerable clusters of houses. Usually the houses are built separate from each other and in some places as at Rángrig there is a village square. The houses are flat-topped, with clean white-washed walls and a dark parapet of stacked fuel on top. Some of them, notably Kyibar and Ḍángkar, are very picturesquely situated : so are the monasteries. Kyi monastery is a striking collection of buildings, piled together on an eminence which dominates the plateau by the main river, underneath the enormous escarpment of the heights which flank the valley. The Thánggyud monastery looks from a distance like a mediæval castle : it is coloured red with white stripes, resembling battlements, and stands at the edge of a deep canyon looking up it to the Main Himalaya.

Ḍángkar, the capital of Spiti, is a large village, 12,774 feet above the sea, built on a spur or bluff which projects into the main valley and ends in a precipice. The softer parts of this hill have been worn away, leaving blocks and columns of a hard conglomerate, among which the houses are perched in curious

No. 19. In a Spiti Village.

Villages.

and inconvenient positions. On the top of a hill is a large house known as the fort, which, with some cultivated land attached, belongs to Government. On a point of the hill lower down is a large monastery. The aspect of the whole place is very picturesque. It has been the seat of Government of the country from time immemorial. Major Hay, Assistant Commissioner, is said to have spent the winter of 1849-50 in the Ḍángkar Fort.

DISEASES.

Diseases.

Owing to the remarkably healthy character of the climate, Spiti has little disease as a rule. There is practically no goitre, but a certain amount of dysentery occurs at times. In the winter of 1915-16, several scores of people were swept off by a serious epidemic of what was probably dysentery with fever, the young Nono with two of his cousins being among the victims. The cause is attributed to unseasonable failure of snowfall, coupled with the insanitary habits of the people in winter time, when infants are frequently buried in the walls of houses, and the intense cold drives the people to remain indoors for weeks together.

CUSTOMS OF INHERITANCE AND MARRIAGE, ETC.

Customs of inheritance.

The constitution of the Spiti family has justly been described as a system of primogeniture whereby the eldest son succeeds in the lifetime of his father. As soon as the eldest son marries a wife he takes over the family estate and the ancestral dwelling, or the "big house" (*kháng-ch'én*), as it is called locally, whence its occupant, the head of the family, is known as *kháng-ch'énpa*. On his succession the father retires to a smaller house (*kháng-ch'úng*), and so is called *kháng-chúngpa*; he receives a definite plot of land for his maintenance, and has nothing more to do with the family estate and its burdens. His younger sons, the brothers of the *kháng-ch'énpa*, are sent in their childhood to Buddhist monasteries in which they spend their lives, unless in the event of the *kháng-ch'énpa* failing to beget issue, one of them elects to abadon the monastic life and take his eldest brother's place in the family In addition to these two kinds of estates the large holdings which descend intact from eldest son to eldest son and the smaller plots which similarly descend from ousted father to ousted father—there are still smaller (*yang-ch'úng*) plots held either by the grandfather if he survives the ousting of his eldest son by his eldest grandson, or by female or illegitimate relatives of the famliy, or by the tenants. The holders of these plots are called *yang-chúngpas*. *Dúd-thúlpa* is one who has nothing but smoke (*dúd*) to wrap himself up in, a man who works for food or wages. In some cases *dúd-thúlpa* own small plots of land, and then father and

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Customs of inheritance.

son live on together as the land is too small to be divided, and there are no responsibilities which the father could transfer with the land to the son. In the same way two or more brothers of this class live on together, often with a wife in common, till one or other, generally the weakest, is forced out to find a subsistence elsewhere. It is only rarely that the son of a *dúd-thúlpa* becomes a monk.

As a rule, the monkish profession is confined to the younger sons of the regular landholders, who take to it of necessity, but get as maintenance the produce of a field set aside as *da-zhing* or *diu* (from *dába*, another word for *láma*). It is, however, only the second son who is entitled to claim *da-zhing*, and many do not take it from their elder brothers and have all in common with him, including their income from begging, funeral fees, &c. This is to the advantage of the elder brother, as a celibate monk's expenses are, of course, very small. When there are more than two brothers, the younger ones, though they cannot get *da-zhing*, are considered entitled to some subsistence allowance from the head of the family, but in return they do certain kinds of work for him in the summer, during which season only the elder monks remain in the monasteries. For instance, as long as they are *tsun-pa* or *ge-tsul*, that is, neophytes or deacons, and not *gelong* or fully-ordained monks or priests, they will carry loads and do all field work except ploughing ; when *gelong*, they will cook, feed cattle and sheep, and do other domestic services, but not carry loads or cut grass or wood. But " once a monk always a monk " is not the law in Spiti. Supposing the head of a family to die and leave a young widow, with no son or a son of tender age only, then the younger brother, if there is one, almost always elects to leave the monastery, and thereupon he is at once considered his brother's widow's husband. She cannot object, nor is any marriage ceremony necessary. If there was a son by the elder brother, he, of course, succeeds when of full age, and his mother and uncle retire to the small house, and the other sons, if any, go into the monasteries in the usual way. So, again, if the head of the family has only daughters, and having given up hope of getting a son, wishes to marry one of the daughters and take her husband into the house as a son and heir, it generally happens that the younger brother in the monastery objects, and says that he will leave the priesthood and beget a son. In such case his right to do so is generally allowed : sometimes he will marry a wife himself, and put his elder brother in the small house : sometimes, by agreement, he will cohabit with his sister-in-law in hope of getting a son by her. A monk who throws off the frock in this way has to pay a fine to his monastery. Many decline to become laymen : this is a rule in the case of those

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Section C.

Customs of inheritance.

who have attained to the grade of *gelong*. Where the *láma* brother declines, then, in the lower part of the valley (*i.e.*, Pin and Shám), it is agreed that the father or widow-mother can take a son-in-law (*gori gothon*) to live in the house and succeed as son and heir, and no kinsmen (if there are any) can object. In the upper part of the valley this right does not appear to be so clearly established: the objections of near kinsmen are sometimes attended to, or a field or two given to them by way of compromise. Kinsmen, however, are, of course, very few, as the only way in which a younger brother can found a separate family is by becoming son-in-law and adopted son to another landholder. Such a man might claim on behalf of his younger son, but not on his own behalf or that of his eldest son, as it is a rule that for each holding or allotment there must be a separate resident head of the house to do service for it, as well as paying the revenue. Sometimes an illegitimate descendant of the family, who has been living on the estate as a *yang-ch'úngpa*, will claim as a kinsman and succeed, but he cannot be said to have any absolute right or title. Unmarried daughters of a landholder are entitled to maintenance from their father, brother, or nephew, that is, from the head of the family for the time being; he must either let them live in his house on equal terms with his own family, or must give them a separate house and plot of land; they forfeit their claim if they go away to live in any other man's house, but no other act of theirs will entitle their father or his successor to cast them off, or resume the house and plot of land once given during their life-time. Many women live and die as spinsters in their fathers' or brothers' houses. Their chance of marriage is small, as all younger sons become monks, the monks are bound to celibacy (except in Pin *Kothi*), and bigamy is only allowed in the case of the head of a family who has no son or expectation of getting one by the wife he first marries. In case the brother-in-law of a widow does not come out of the monastery to take his deceased brother's place, or in case there are no brothers-in-law, the widow can marry again, and does not forfeit her interest in the estate by so doing so long as she continues to reside on it : on the contrary, in default of issue by the first husband, the children by the second will succeed to the estate. She can marry any person of the same class as herself. If there happens to be a near kinsman available, she would be expected to select him; but whether it would be absolutely obligatory on her to do so is not quite clear. A marriage feast is given to celebrate the event.

Monogamy and polyandry.

It follows from the above that monogamy is the rule in Spiti and that a husband takes a second wife during the

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Monogamy and polyandry.

life-time of his first only under exceptional circumstances. On the other hand, polyandry is not practised, except among the *dúd-thúlpas* and among the *buzhens*, the descendants of the monks of the Pín monastery which requires no vow of celibacy from its members, and these have adopted the custom admittedly for prudential reasons, because they are a landless class, and find some difficulty in getting a living.

Marriage customs.

In Spiti when the bridegroom's party goes to bring the bride from her father's house, they are met by a party of the bride's friends and relations who stop the path; hereupon a sham fight of a very rough description ensues, in which the bridegroom and his friends, before they are allowed to pass, are well drubbed with good thick switches.* In Spiti if a man wishes to divorce his wife without her consent, he must give her all she brought with her, and a field or two besides by way of maintenance; on the other hand, if a wife insists on leaving her husband, she cannot be prevented from so doing; but if no fault on the husband's side is proved, he can retain her jewels; he can do so also if she elopes with another man, and in addition can recover something from the co-respondent by way of fine and damages. There is a recognized ceremony of divorce (*kúdpa chádché*) which is sometimes used when both parties consent. Husband and wife hold the ends of a thread, repeating meanwhile "one father and mother gave, another father and mother took away: as it was not our fate to agree, we separate with mutual good will"; the thread is then severed by applying a light to the middle. This ceremony always takes place before the Nono, the five *gádpo ch enmo* and the *gádpo chúngún*. The Nono allows as many people as care to come to witness the divorce. After a divorce a woman is at liberty to marry whom she pleases; if her parents are wealthy, they celebrate the second marriage much like the first, but with less expense; if they are poor, the proceedings are informal.

LANGUAGE.

Language.

Throughout the whole of Spiti the language is Tibetan or Boti, of a similar dialect to that spoken in Lhása. A very few men pick up a smattering of Hindustáni in their wanderings and one or two have learnt Urdu in the Naggar School.

TRIBES AND CASTES.

Tribes and castes.

In Spiti, as in other Tibetan countries, there is no such distinction of caste as there is among Hindus, and the terms used

* A marriage not being a common event in a family a good deal is spent on the occasion. The bridegroom's father presents the bride's father with two or three ponies and 30 *khals* of grain, and also gives her mother a present of Rs. 6 in cash. On the other hand, the bride is provided by her parents with a dowry of clothes and ornaments of the value of Rs. 100 or more including the *lérag*, which distinguishes the married woman. It is usual to spend about Rs. 50 on the marriage feast.

below are descriptive of classes rather than castes. There are four noble families, the males of which are called Nono and the females She-ma: the hereditary *wazír* is called Gyálpo. These families reside at Kyúling, a village on the main river, at Máné below Ḍángkar, at Kúling in Pín Kothi, and at Gyúrgul near the Lingti stream. The Pín family is said to have been ennobled because of its Chief having successfully repelled an invasion of Tibetans during the time when Spiti was attached to the Ladák kingdom. A Nono's daughter is called *jo-jo* and her husband, if not himself a Nono, receives by his marriage the title of *jo*. The present hereditary *wazír*, or Nono as he is officially called, is named Jámpa Gyámsto and had been for some years *sarbaráh* for his minor nephew who died in the winter of 1915-16. He has married a Bashahri lady. The Nono families generally marry into Ladák if they can.

Tribes and castes.

The great mass of the peasantry are called *ch'a-zhang* or middle class, *i e.*, midway between the Nono families above and the menial and artizan classes below. The descendants of the married monks of Pín, known as *buzhens* or *pozhens*, are regarded as *ch'a-zhangs*. As all are Buddhists, there is supposed to be no caste, but the influence of Hinduism is noticeable in a class etiquette which appears to have become more exacting recently, for one class does not now ordinarily smoke or eat with another. Each class contains many clans, and marriage within the clan is forbidden. Among *ch'a-zhang* clans are (to mention only the more important) Náru, Gyázhingpa, Kyóngpo, Lonch'ónpa, Hasir, Nyérpa. Marriage brings a woman into her husband's clan and the children belong to the same. The clans (*rúspa*, pronounced *ruiwa*) are not local, and members of each may be found in any village. In default of natural heirs, the members of the clan (*phaiwat*), wherever they may be living, inherit as against the people of the village.

The menial classes are collectively known as "outsider" (*pyipa*) and include, in order of precedence, carpenters (*shing-zopa*), smiths (*zo*), and musicians (*beta*). A *ch'a-zhang* may not marry one of these without entering their caste. There are carpenters only in Pín *Kothi*: there is no weaving caste, and weaving is done by *ch'a-zhang* women.

Servant classes.

Some of the richer landholders have permanent men-servants (*yogpo*) who have no land, but are married and live on the estate, or the servants may be temporary, engaged for one year only, and called *lápa*. These do not marry but usually keep some unmarried woman of the house or neighbourhood. The permanent servants of the monasteries, who light fires, etc., are called *tóbóché*.

CHAP I. Section C.

Character of the people.

One of the first impressions received by the traveller is that the people are refreshingly cheerful and independent. They are also noisy and dirty, but the villages are usually clean and so are the living rooms of the houses. The people are not in the least ashamed of begging. They are on the whole idle and fond of gambling and alcoholic liquors. They are also, like all Mongolians, secretive and often ready with a false reply, until they are quite convinced of the real intentions of the questioner.

Even at the present day they are a race without guide; they seldom have recourse to the law courts, or even to the primitive justice dispensed by their Chief the Nono, and if a man's word may sometimes be open to doubt his oath may always be relied on. But though honest they are not simple enough to be easily imposed upon; they can form shrewd opinions as to their own interests, and show more independence of spirit than Kulu people generally do. Among themselves they are kind and courteous, especially to women and children: it is pleasing to see the care with which the weaker ones are helped across a dangerous ford or bridge, and the gallantry with which at meals the women are helped first and to larger portions than the men! Hospitality is freely and fully shown to strangers. Offences against the person and against property are very uncommon, and the Nono's register of convictions rarely shows anything much more serious than an altercation between husband and wife. As regards the relations between the sexes the standard of morality is higher at any rate than in the neighbouring Hindu tracts.

RELIGION.

Religion of Spiti.

The religion of Spiti is the Buddhism of Tibet with no admixture of modern Hinduism. Spiti is and probably will always remain remote and difficult of access: its border touches Tibet, and it has intimate relations with that country: and there is no likelihood of Hinduism obtaining any hold upon its inhabitants.

The lámáistic system.

The Lámáism of Tibet, "perhaps the most utterly corrupt form of the religion of Gautama," is, however, deeply contaminated by the indigenous demonology of the mountains, and the description of the Buddhism of Láhul on page 200 is also applicable to the religion of Spiti.

One of the most peculiar features of the lámáistic system is the hierarchy from which it takes its name. The teaching of Buddha included an elaborate monastic system, but no priests, for there was no god to worship or ceremonies to perform, and no hierarchy, for all men were equal: and till about A. D. 1400 the *lámás* or monks of Tibet recognized no supreme head

The lámáistic system.

of the faith. But about that time the abbot of the Gáldán monastery proclaimed himself the patriarch of the whole lámáistic priesthood, and his successor, of the Tashi monastery, declared the grand *lámás* to be the perpetual re-incarnations of one of the Bodhisatwas or semi-Buddhas, who, as each *lámá* died, was born again in the person of an infant that might be known by the possession of certain divine marks. The fifth in succession founded the hierarchy of Dalái *lámás* at Lhása in 1640, and made himself master of the whole of Tibet. He assumed the title of Dalai *lámá*, while the *lámá* of Táshi still continued to enjoy his former privileges; and thus there now are two great chairs filled by a double series of incarnations. There is also a third great *lámá* in Bhután, known among the Bhutánís as the Dharma Rája, but among the Tibetans as Lord of the World. Below these three great *lámás* come the ordinary monks, who live for the most part in monasteries ruled by abbots whose only claim to precedence one over another is derived from the importance of the institution over which they preside, or from the influence of personal sanctity. They are, with the exception of the Drúgpa sect (or Nyíngma) bound to celibacy, at least while leading a monastic life, and are collectively called *gendun*, or clergy. They consist of *lámás* or full monks (for the word means nothing more), and novices or neophytes. The *lámás* are distinguished by rosaries of 108 beads, which they wear as necklaces.

The Tibetan *lámás* are divided into three sects of which the most ancient is the Nyíngpa, whose members wear red caps and scarves, and to which the *lámás* of Ladák belong. The Drúgpa sect also wear red caps and scarves, and are ruled over by the Dharma Rája or great *lámá* of Bhután, in which country they are most numerous. The Láhul *lámás* belong almost entirely to this sect, which permits its monks to marry. All *lámás* wear red robes (except the Geldanpá which exists only in Zangskar and wears yellow), but yellow caps and scarves are worn as a distinguishing mark by the Gelugpa sect, which was founded about 1400 A.D., by the first great *lámá* of Gáldán; this sect prevails chiefly in Tibet, and both the Dalái and the Táshi *lámás* belong to it, and its members are bound to celibacy. Nuns are not recognised by the Gelugpa sect, and the nuns of Spiti live not in convents, but in houses of their own, whereas the nuns of Láhul are allowed to live in the monasteries. The sect to which a Buddhist belongs has not necessarily any connection either with his tribe or with his village.

Monasteries in Spiti.

The Spiti monasteries are five in number. The monks of Kyi, Dángkar and Tábo monasteries belong to the celibate Gelugpa sect. Those of the Tháng-gyúd monastery are also

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Monasteries in Spiti.

Gelugpas, but are distinguished by the name of Sakya, and wear red caps and scarves. Another peculiarity of this sect is that its members in addition to studying and reverencing the Buddhist scriptures and promulgating the principles of their religion practise magic and incantations as well. In consequence of this the robbers who lie in wait for travellers along the road to Lhása have a wholesome dread of the Sakyas, and make no attempt to molest them. It is to the Tháng-gyúd monastery that the younger members of the family of the hereditary Nono or Chief of Spiti are sent. The *lámás* of the fifth monastery, Pín, are of the non-celibate Drúgpa sect; they and their descendants are further referred to below. The monasteries are maintained partly by the produce of the lands belonging to them, and of which the revenue is assigned to them, but chiefly by assignments (called *bón*) from the gross land revenue of the *wazíri* to which reference will be made hereafter.

These monasteries are extensive buildings, standing on high ground, and apart from the villages. In the centre of the pile are the public rooms consisting of chapels, refectories, and store-rooms; round them are clustered the separate cells in which the monks live. Each landholder's family has its particular *dráshay* or cell in the monastery to which it is hereditarily attached, and in this all the monks of the family, uncles, nephews, and brothers, may be found living together. The monks ordinarily mess in these separate quarters, and keep their books, clothes, cooking utensils, and other private property in them. Some mess singly, others two or three together. A boy monk, if he has no uncle to look after him, is made a pupil to some old monk, and lives in his cell: there are generally two or three chapels: one for winter, another for summer, and a third perhaps the private chapel of the abbot or head *lámá*. The monks meet in the chapel to perform the services, which ordinarily consist of readings from the sacred books; a sentence is read out and then repeated by the whole congregation. Narrow carpets are laid lengthways on the floor of the chapel, one for each monk; each has his allotted place, and a special position is assigned to the reader: the abbot sits on a special seat of honour, raised a little above the common level of the floor; the chapels are fine large rooms, open down the centre, which is separated from the sides by rows of wooden pillars. At the far end is the altar consisting of a row of large coloured figures, the images of the *avátár* or incarnation of Buddha of the present age, of the coming *avátár* of the next age, and of Gúru Rínpóch'é, Atisha, and other saints. In some chapels a number of small brass images from China are ranged on shelves on one side of the altar, and on the other stands a book-case full of the sacred books, which are bundles of loose sheets

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printed from engraved slabs in the fashion which has been in use in Tibet for many centuries. The walls all round the chapel are painted with figures of male or female divinities, saints and demons, or hung with pictures on cloth with silk borders; similar pictures on cloth are also suspended across the chapel on ropes; the best pictures are brought from Great Tibet as presents to the monastery by monks who return from taking the degree of *gelong* at Lhása, or who have been living for some years in one of the monasteries of that country. They are painted in a very quaint and conventional style, but with considerable power of drawing and colouring. Huge cylindrical prayer-wheels (*túng-gyúr*) which spin round at a slight touch of the finger, stand round the room or on each side of the altar. In the store-rooms among the public property are kept the dresses, weapons, and fantastic masks used in the *ch'am* or religious plays (these masks much resemble the monstrous faces one sees in the carving outside Gothic Cathedrals); also the drums and cymbals, and the robes and quaint head dresses worn by the superior monks at high ceremonies.*

The refectory or public kitchen is only used on the occasion of certain festivals,† which sometimes last several days, during which special services are performed in the chapels: while these festivals last the monks mess together, eating and drinking their full of meat, barley, butter and tea. The main source from which the expense of these feasts is met is the *bón*, which is not divided among the monks for every-day consumption in the separated cells. To supply his private larder, each monk has, in the first place, all he gets from his family in the shape of the produce of the "*lámá's* field" or otherwise: secondly, he has his share, according to his rank in the monastery, of the *bulwa* or funeral offerings and of the harvest alms; thirdly, anything he can acquire in the way of fees for attendance at marriages, or other ceremonies or in the way of wages for work done in the summer. The funeral offerings made to the monasteries on the death of any member of a household consist of money, clothes, pots and pans, grain, butter, etc.; the harvest alms consist of grain collected by parties of five or six monks sent out on begging expeditions all over Spiti by each monastery just after the harvest. They go

* The *ch'am* or religious dances performed in the Tibetan monasteries are worth seeing: if introduced into a Christmas Pantomime in London, they would be effective as tableaux or spectacles. The abbot and superior monks, dressed in full canonicals, sit round the court-yard of the monastery, clanking huge cymbals to a slow time or measure. Bands of other monks dressed in brilliant silk robes, with hideous masks, or extraordinary head-dresses, and with strange weapons in their hands dance in time to the measure, advancing and retreating, turning and whirling with strange studied steps and gestures. The story of the ballet is the combat of the gods with the demons. The latter had become too powerful and tyrannical over mankind, so the gods descended from heaven, took the shapes of strange beasts and in that guise fought with and destroyed them.

† There is one on the 29th of each month in honour of the Gáldan *lámá*.

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round from house to house in full dress, and standing in a row chant certain verses, the burden of which is – "we are men who have given up the world, give us, in charity, the means of life; by so doing you will please God whose servants we are." The receipts are considerable, as each house gives something to every party. On the death of a *lámá*, his private property, whether kept in his cell or deposited in the house of the head of the family, goes not to the monastery, but to his family, first to the *lámás* of it, if any, and in their default, to the head or *kháng-ch'énpa.* When a *lámá* starts for Lhása, to take his degree, his *kháng-ch'én-pa* is bound to give him what he can towards the expenses of the journey, but only the more well-to-do men can afford it; many who go to Lhása get high employ under the Lhása Government, are sent to govern monasteries, etc., and remain there for years; they return in old age to their native monastery in Spiti, bringing a good deal of wealth, of which they always give some at once to their families.

Monks and friars.

The monks of Pín are of the *Drúgpa*, and not of the *Gelugpa* or celibate class, to which those of the other four monasteries belong; they marry in imitation of their patron saint Gúru Rín-po-ch'é, though in their books marriage is not approved of; this saint founded several orders, of which that to which the monks of Pín belong is the most ancient, and is called Nyíngma. The wives and families of the monks live not in the monasteries, but in small houses in the villages. Every son of a *láma* or monk becomes a *buzhen*, which is the name given to a low order of strolling monks or friars. There are nineteen families of these *buzhens* in Pín *Kothi*. Sometimes the younger son of a landholder becomes a *buzhen* in preference to going into the monastery. The Pín *luzhens* are a very curious set of people; they get a living by wandering in small parties through all the neighbouring countries, stopping at every village, and acting plays, chanting legends, and dancing like whirling dervishes; many also trade in a small way by bartering grain for salt with the Tibetans, and then exchanging the salt with the Kanáwar people for iron, buckwheat, or honey; they also often undertake to carry loads for travellers across the passes, as substitutes for the landholders. They dress much like other monks; but, instead of shaving their heads, wear their hair in long straight twists, which gives them a very wild appearance.* According to the story told Mr. Lyall in Spiti the *bushen* order was found by one Tháng-teóng Gyálpo (*lit.*, king of the desert) under the following circumstances: A certain king of Lhása, the famous Langdarma, perverted the people of Tibet from

* In 1868-69, when one of the three grand *lámás* of Tibet made a visitation tour through Láhul and Spiti, the *bushens* were admonished to cut off their hair, at the unclerical appearance of which the grand *lámá* professed himself greatly scandalized.

Buddhism to a new religion of his own. He succeeded so well that in the course of fifty years the old faith was quite forgotten, and the *Om máni pádme hom*, or sacred ejaculation, quite disused. To win back the people Chan-re-zig, the divinity worshipped at Triloknáth, caused an incarnation of himself to be born in the king's house in the person of Tháng-teóng Gyálpo. The child grew up a saint and a reformer; he saw that it was impossible to reclaim the people by books, and he therefore adopted the dress since worn by the *buzhens*, and spent his life in wandering from village to village, offering to amuse the people by acting miracle-plays on condition of their repeating after him the chorus *Om máni pádme hom* wherever it occurred in the chants or recitation. In this way the people became again accustomed to repeat the sacred sentence, "their mouths became purified," and the religion of Buddha revived.* There is something rather impressive about the performances of the Pín *bushens*. A long screen is first put up formed of pictures illustrative of the legends, and quaintly painted in brilliant colours on cloth edged with silk. An image of the patron saint or founder of the order is enthroned in front of the screen; the leaders of the company then appear in front of it, wearing a head-dress formed of a mass of streamers of bright-coloured silk. Conch shells are blown to collect the crowd, and barley thrown into the air as an offering to the saint: the proceedings then commence with an introductory chant by the leaders to the accompaniment of a kind of guitar, and every now and then the whole crowd of men and women join in with the chorus of *Om máni pádme hom* which they give with much fervour, keeping good time, and blending their voices harmoniously. After a time the rest of the company come forward dressed up and masked, and perform a play with interludes of dances to the music of cymbals,† the dancing ends in the wildest gyrations: the little stage hemmed in by the quaintly-dressed crowd, and with the huge barren mountains towering behind for back ground, makes a picture not easily forgotten.

One curious sort of conjuring trick is performed by the *buzhens*, the breaking of a block of stone over the body of a boy, one

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* Mr. Lyall, from whom this description is taken, says: "There may be errors in this story, and it may be a wrong account of the foundation of the order. I give it as it was told me in Spiti to show the kind of ideas the people have in their heads at the present day. Any one who wants serious information as to Tibetan Buddhism can refer to General Cunningham's *Ladák*."

† Mr. Lyall, who is again being quoted, writes: "I took the trouble on one occasion to find out the story of the legend which was being recited and enacted; the gist of it was as follows: A certain anchorite who had lived alone for twelve years in an inaccessible forest one day washed his robe in a pool in the hollow of a rock. A doe drank the water in the pool, conceived therefrom, and gave birth at the door of the anchorite's cell to a creature in the form of a girl. Under the anchorite's care she grew up into a beautiful woman, was called Sun-face, and married a king. The other queens conspire against her and accuse her of being a witch and eating human flesh; they murder her child, and make the king believe she killed it to feast on its body. Sun-face is driven out, and leads a wandering life in the forests till the king discovers the plot, puts the conspirators to death, and recalls her."

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Monks and friars.

of their number. The lad stripped to the middle is laid on his back on the ground, and the block of stone, about two feet long by one foot broad and one foot deep, is laid across, and apparently supported entirely by his stomach. One blow from a globular stone about a foot in diameter cleaves the block into two portions which fall on either side while the boy springs to his feet unharmed.

Idol temples.

Apart from the monasteries and their chapels and from the chapels in private houses, some villages contain small temples sacred to demons or *lhás*, and hence called *lhá-kháng*, unpretentious externally like small one-roomed houses, and furnished inside much in the same manner as a private chapel. One or two of the village fields are set apart for the maintenance of the *lhá-kháng*. Even less pretentious shrines are to be found on the summits of small eminences, or sometimes in the fields in the shape of niches cut in rocks, or left open in the sides of large masonry pillars. The niche is occupied by a small image with a brass vessel for burning oil in front of it, and occasionally a *láma* comes and chants prayers before it or draws uncouth sounds from a large brass trumpet.

Effects of lamaism.

There can be little doubt that lamaism keeps its hold on the people by old association and by methods of terrorism. The people are strongly wedded to their old beliefs and they are threatened with many pains and penalties if they transgress the rules. The system ensures that the population remains where it is and does not overflow into the surrounding countries. There is a ban laid on the planting of trees and the opening up of new sources of water. The result is that even old water-ducts are neglected. There are to be seen in some places untapped or wasted springs and streams and it is sometimes possible to hear water running beneath the débris slopes, which is unutilised. If the monasteries could be emptied and the many unmarried women settled in homes with husbands and children, the country would probably be found able to bear a very much larger population. But this could only happen if the monastic system were broken and the *lámás* know it. They are also supported by the *kháng-ch'énpa* whose control of the family lands would be much diminished if their younger brothers each had their share. So the *kháng-ch'énpa* plough their land and then loaf through the pleasant summer till their industrious women-folk have brought the crop to maturity and cut it: the monks also emerge from their cells and enjoy the life of the village. But the net result is an arrested growth of ideas and a stationary race of men.

The blacksmiths (*gára* or *zó*) are skilful workers in iron, and turn out pipes, tinder boxes, bits, locks and keys, knives, choppers, hoes, ploughshares and chains. There are no heavy crowbars or hammers, etc., for road work or breaking up stones, and as in Kulu the art of casting and of tempering steel seems unknown. But some of the work is of an intricate and quaint design. The articles are generally made to order, the smith receiving food and wages and being supplied with iron.

Tanning is not done: the hides which are imported from Láhul are worked up raw into thongs.

Three kinds of woollen cloth are made, called *thérma*, *púrug*, and *shâma*. The first is a fine thin stuff dyed red; the second is thick and rough; and the third a thick smooth cloth. All the local manufacture is used up in the country, and much is imported from Bashahr. Black dye is obtained from the root of a wild plant (*pórlo*) and yellow dye from the leaves of another called *nyálo*. Madder (*márpo*) is imported from Kulu. Much wool is imported from Tibet at 4 *kacha sér* per rupee, and in exchange cereals are exported.

Implements.

The axe (*tíri*) is made locally from Kulu iron: the snow-spade (*khyem*) is a plain wooden article. The brace and bit (*sor*) is an ingenious tool, rather on the lines of a Punjab lathe but vertical: a horizontal stick with a hole in it is passed over the vertical shaft and fits loose: it is attached from each end to the top of the vertical shaft by two narrow leather thongs, and after being twisted round once is pushed up and down, the twist causing the thongs to pull the shaft round: the momentum is kept up by a round stone through which the shaft passes, by a bored hole: the iron bit is toothed and soon makes a hole. Hooped wooden buckets (*chúsom*) are imported from Bashahr. Water pots (*múg* or *záma*) are made locally and resemble the ordinary *gharra*: they cost 4 or 5 seers of barley: there is no potter caste. Saddles (*gácha*) are all imported from China and cost Rs. 12 or Rs. 13, and have a peak front and back and heavy stirrups (*yóbchen*): the leathers are of untanned hide. Sheep shears are rather like English ones but are not made of steel, and the blades are very short.

Food.

The staple food of the people is meal made from barley which is parched before being ground, in taste not unlike oatmeal. It is called in Spiti *sampa*, in Kulu *satu*. At the morning and evening meals it is consumed in the form of soup or thin porridge called *thúgpa*. Water is boiled in a cauldron, and *sampa*, salt, and, if procurable, vegetables, fresh or dried, are stirred in; lumps of *sampa* dough are also put into the mixture to bake floating

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Food.

on the top and to be eaten with the soup. On great occasions meat is added to the soup to give it flavour, but is eaten separately. At midday round balls (*pólda*) of *sampa* dough are eaten with butter. Wheat flour when consumed is made into cakes or lumps of dough which are prepared with *thúgpa*. Peas are eaten in the form of peasemeal, mixed with the *sampa* or wheat or buck wheat flour. From mustard seed oil is extracted which is sometimes added to the *sampa* or wheat flour dough. The oil is also used to supply the light which is kept perpetually burning before the altar, not only in the monastery chapel, but in the private chapel which is maintained in each *kháng-ch'énpa's* house. The refuse of mustard seed from which oil has been expressed is carefully kept, and is valuable cattle food. Tea is much used, on occasion by every body, and constantly by such as can afford it; and is drunk at the morning or evening meal before the *thúgpa*. It is mixed with water and boiled in a copper cauldron. When the water is thoroughly boiling salt and butter are added and well stirred into it. For the proper enjoyment of tea and soup it is necessary for every one to carry about with him a small wooden cup which is kept in the bosom of the coat, next the skin. These cups come from Tibet, and cost about four annas each. Spoons are also generally used, and the soup or tea is always helped from the cauldron with a ladle. Tea is an expensive luxury. A coarse Indian kind can be bought in Kulu usually for 2 annas a seer, which sells in Spiti generally at 5 annas. Chinese tea used to be brought in large quantities from Tibet, but not so much comes in now: it sells at one *kacha sér* per rupee. Tobacco is bought by Khampas in Kulu at 8 annas per *bhatti* (4 lbs.) and sells in Spiti at 12 to 16 annas. *Ch'áng*, or barley beer, and whisky (*árag*) are the stimulants used: every one brews or distils in his own house, and there are no drinking shops.

Dress.

The ordinary dress of the men consists of a skullcap, a long loose frock or coat of thick woollen cloth girt in at the waist by a long broad sash, and a pair of boots, with leathern soles and cloth tops reaching to and gathered below the knee. Some who can afford it wear also a silk or cotton undercoat; the coat is generally the natural colour of the wool, when new; the other garments are red, or red and black. A bright iron pipe (*gáng-zag*) and a knife (*dri*) in sheath are stuck in the belt, from which hang also by steel chains the flint steel, and tinder box—all together called *mébchag*—a metal spoon (*thúrmang*), and a bunch of the most fantastically shaped keys (*kulig*). The locks are shaped like those used in China and Japan, the key pushes the bar out by pressing out the whole of the interior of the lock. In the fold of his coat next the skin every man carries a wooden (*lákor*) or metal (*górmo*) drinking-cup, a tobacco pouch (*tirkhug*), some

parched barley meal and other odds and ends. Many wear the pigtail (*chuti*). It is also a common sight to see a man constantly whirling the hand prayer-wheel (*máne*), with a religious book slung on his back and repeating the *Om máni pádme hom* at every pause in the conversation. The monks, when not engaged in religious functions, go bare-headed, and wear a rosary (*thránga*) of beads, usually of wood, glass, or bone. Astrologers dress in red from head to foot. The women wear a coat, sash, and boots like the men, but the coat is always of a dark colour; they also wear loose red trousers, the ends of which are tucked into the boots, and a shawl over their shoulders; they go bare-headed, and wear their hair in a number of small plaits which hang down the back.

The Spiti men wear more ornaments than the Kanets of Kulu, but the precious metals find little favour with them. Nearly every man wears a necklace (*óltig*) composed of turquoises and lumps of coral, ambers (*róshel*) and mother-of-pearl (*tung*) roughly strung together, and a short pendant (*náyu*) composed of turquoise and coral hanging from either ear. Glass bead necklaces are also often worn, and every second man has a *gau* slung round his neck. This is a small peculiarly shaped box; the body is of copper, but the front is of finely worked silver and gold with an orifice in the middle fitted with glass through which the *jantri*, for which the box is the receptacle, can be seen. These boxes are imported from Tibet, from which country also the turquoises and mother-of-pearl of the *óltig* and *bérag* are imported. The amber and coral for the *óltig* are obtained from Ladák or Bashahr and from Hindustán, respectively. Men and women alike wear the bangle or *dugu*. The most striking ornament worn by women is the *bérag*, which consists of a strip of padded cloth generally red, hanging from the forehead nearly half way down the back, studded with turquoises and square silver talismans, and possibly a sapphire or two. The stones and talismans are brought from Tibet, but the *bérags* are made up in the homes of the people. The *bérag* is connected with either ear by the *puri*, an ornament consisting of four straight silver tubes, and by the *gurlen* or short chains which attach it to the earrings. The earrings (*konta*) worn are similar to those of Kulu women, with similar tassel pendants (*chábu*). The *kanthi* necklace too seems to have been introduced from Kulu into Spiti, retaining its name there. An ornament (*ngunleu*) somewhat resembling the Kulu *tora* is also worn. Instead of the *bérag*, girls wear only a single turquoise threaded on the hair near the parting: this, like the snood in Scotland, is a sign of their being unmarried. In winter both sexes wear great-coats made of sheepskin with the wool on.

CHAP. I. Section C.

Dwellings.

A Spiti house generally has a small central court which is surrounded on three sides by the buildings containing the living-rooms, etc., and is closed in on the fourth by a wall in which is the entrance door. The buildings are two-storeyed on two or sometimes on all three sides. The flat roof is an important part of the house, for on it are kept the household stacks of fuel (*shíng ben*) and fodder (*tsáben*); sometimes too a little flower-garden is there maintained, and invariably there are one or two black *yak* tails mounted on top to frighten away evil spirits. The ground-floor consists chiefly of quarters for the ponies, cattle and sheep, with closets for keeping a certain portion of the winter-fodder, but it also contains at least one large room in which the family spend most of their time in the winter. Devoid of windows, like the cattle stalls and other apartments on the ground-floor, this room is warmer in that season than the upper storey from which it is dimly lighted by a trap in the ceiling. The apartments in the upper storey, which are little used except in summer, are good-sized rooms, lighted by small windows hung with wooden shutters; the largest is about 20 feet square, and has a roof supported by a double row of upright posts, and one of them is the family chapel, which is ordinarily very well furnished with images, large prayer cylinders, religious pictures, books and sacramental vessels. The walls are white-washed inside and out, and neatly topped with a coping of faggots.

The furniture in a Spiti house has a general resemblance to that in a Láhul one, but tubs and pails, the woodwork of which comes from Bashahr, are much used and the churn for beating up the tea with salt and butter is never missing.

Disposal of the dead.

Corpses are usually burnt as in Láhul, but in Spiti they are sometimes exposed on the hills to be eaten by wild beasts, or cut into small pieces and thrown to dogs and birds, according to the custom of Tibet. In some of the Spiti monasteries, the embalmed bodies of deceased abbots dressed in full canonicals and placed in a sitting posture have been interred in masonry pillars, as in Tibet. But as a rule the abbots are now so placed for about a week only, and then cremated, the remains being subsequently pounded up and mixed with clay in the form of an idol and painted. Infants are frequently buried in the walls of houses in the winter when the ground is frozen and fuel is scarce.

Festivals.

The various festivals held in Spiti are as follows :—

(1) In August or September at Dángkar, the great fair called *Námgan ch'enmo* ("great fun"), at which horse races are held.

(2) In November at the Dángkar fort (*khar*), the *tálsi ch'enmo* (" grand audit ") at which the annual accounts (*tsirug*) are rendered.

(3) Five days later at four monasteries (Kyí, Tábo, Dángkar and Pín) is celebrated the religious festival of the *gúi-tor*, at which are performed the *ch'am* or devil-dances, and other ceremonies intended to prevent diseases and to ensure prosperity: at Tháng-gyúd *gonpa* a similar festival called *jig-jed* is held a month earlier.

(4) The *Námgan ch'úngún* (' little fun ") is held in every village a few days before the crops are cut. The local deities are then worshipped, such as Chó-tar at Dángkar, Cho-berang at Máne, Kula-Kyúng at Póg, Dúngbachan at Kyíbar, Angbo-gyábjin at Losar, Gámba lhá at Sángnam in Pín.

On New Year's Day (*ngamch'od*) lamps are lit, but there is no festival.

Race meetings are held in the summer and afford great amusement. The women are fond of dancing in a long row with crossed hands, swaying up and down and singing: they are always ready for fun and laughter and have nothing dour in their nature.

CHAPTER II.—Economic.

SECTION A.

AGRICULTURE.

General conditions.

The monsoon rainfall reaches Spiti fitfully in the form of misty drizzle. The winter snowfall is comparatively light, but the country is under snow from December to May. Snow does not lie permanently at a lower elevation than 17,500 feet, except in a few crannies, and the glaciers are not as a rule very large. The climate is one of extremes, and the temperature may range through 45 degrees or more in 12 hours. There are no roads, properly so-called, and the passes into Kulu are closed for half the year. The soil is more stony than in Láhul, and not so fertile.

System of agriculture.

The cultivated area of Spiti measures 2,372 acres. The fields were accurately measured by chain for the first time in 1912, the previous appraisements of area being by seed-measure. Cultivation throughout Spiti depends entirely on irrigation from artificial water-courses. This is arranged for in three ways. The majority of the hamlets, which lie on the plateaux described on page 254, get water from streams which trickle down from the cliffs overhanging the plateaux. These hamlets are the worst off for water, for in a year of scanty snowfall the streams dwindle quickly and dry up in the beginning of August. The second method is by collecting spring water into small reservoirs scattered at intervals on the high uplands and drawing it from these ponds when required. This is a common method in the basin of the Shilla and Sampa streams and is not much more satisfactory than the first. Most villages have reservoirs above their cultivated lands, from which earth is taken to strew over the snow before the fields are raked in early summer. The last method, of which only a few villages are able to avail themselves, is to irrigate from a large perennial torrent.

Irrigation is thus almost synonymous with cultivation : the water is led from field to field, filling the lower fields through those above and there is no well laid out system of water channels. The result, as in Láhul, is that the upper fields are not only over-watered but are also used as passages for water and suffer accordingly, while the lower fields are often starved. The channels are not proofed in any way and much water runs to waste.

As soon as possible after harvest has been reaped, the fields are ploughed in September, October, or November for the next

System of agriculture.

year's harvest. The plough cattle are yaks, and are led by ropes attached to rings fastened in their noses instead of being driven in the Indian fashion; a man follows behind, but merely to guide the plough. After the ploughing a layer of manure is spread over the fields; this is the only manuring given to the land in the year, and the litter of the horse and cattle stalls and the house is carefully stored up for the whole year for the purpose. The field thus prepared lies under the snow all the winter, and when the snow has melted requires only to be stirred with the rake or hoe before the seed is sown. The soil is at that time so moist that, except in the lower villages where the land dries quickly, a watering from the canal is unnecessary. It is generally May before all the fields are sown. Forty days after sowing the field is weeded (in the lower villages by the simple process of the plough being run through it), and the first watering (called *yúr·ch'ú*) is given; thereafter the land is watered once a week up to within ten days of cutting the crop. The second and third waterings are distinguished by the names *pharti* (or *shrágti*) and *súm-ts*: the subsequent ones have no names assigned to them. Certain wild plants are pulled up and scattered over the field to decay when the water is turned on to act as manure. The gathering in of the wild herbs from the hillside to form fodder begins about the end of July, and continues during the following month. By the time the hay-making is over, the buckwheat is ready to be cut, or rather to be pulled up by the roots, for that is the manner in which it is reaped. The barley reaping begins about the middle of August, and then the wheat and other grains are gathered in. The straw is of great value in a country where grass is so scarce, and it is cut close to the roots. In Spiti elevation has little influence on the date of ripening of the grain; aspect has some effect, but in the higher villages, where glaciers are the source of irrigation, the crops ripen as quickly as in the lower villages where the water coming from clear streams is less fertilizing. It is nowhere possible to obtain more than one harvest a year from the land. For threshing, permanent floors (*ultag*) are maintained outside the fields, each with an upright pole in the middle to which the animals are secured when treading out the corn. Owing to the peculiar land-holding system of the *wazíri* the fields are very large, the whole of an estate being frequently contained in one field. The cultivation is generally carefully surrounded with rough stone walls to prevent cattle trespass. All the field work except ploughing is done by the women.

Crops.

The following statement shows the area under the various crops. There is no double cropping:—

CHAP. II. Section A.

Crops.

Statement showing the area under different crops, in acres.

1	2	3	4	5	6	7	8	9
Wheat.	Barley.	Peas.	Buck-wheat.	*China.*	*Sarson* (oilseed).	Grass.	Total grains cropped.	Fallow.
214	1,544	297	12	20	123	...	2,220	152

Barley is the chief crop, both because it is the staple food of the people, and also because it is the only crop which can be grown in the higher villages. It is curious that while both in Kulu and in Láhul wheat, and not barley, is the crop which is grown at the highest elevation (about 9,000 feet above the sea in Kulu and 11,500 feet in Láhul), in Spiti the reverse is the case, and wheat cannot be produced at a higher altitude than 12,500 feet above the sea, whereas barley grows well in all the villages, some of which are at nearly 14,000 feet elevation. Mustard and peas can be grown at a greater height than wheat, but are not cultivated in the highest villages except peas occasionally for fodder only. *Chína* and buckwheat are grown only in the lowest hamlets. Buckwheat ripens very quickly, in forty days from the date of sowing. *Chína*, or as it is locally called *tsé tsé* (*Panicum miliaceum*) is the last grain sown and the last reaped. There are three main varieties of barley, locally known as *sérmo*, *nyíu* and *sówa*. *Sérmo* is the best, the grains are large and set in tiers of four in the ear instead of three as in the common barley: it grows only in the lower hamlets. *Nyíu* is the dark-coloured beardless barley of Spiti and Láhul, and *sówa* is not unlike the common barley of Kulu. All produce fine crops.

Rotation of crops.

In the highest villages where barley alone can be produced, the three varieties are sown in successive years, and then the field lies fallow for a year. Lower, where wheat can be grown, the rotation begins with one of the two superior kinds of barley, *sérmo* or *nyíu*; the following year the inferior variety, *sówa*, is sown; wheat follows next year; and the fourth year there is a fallow. Occasionally in place of a fallow the field is sown with peas or mustard. Below 12,000 feet the land is never left fallow, and the order in which the crops are sown is wheat, mustard, *nyíu* or *sérmo*, *sówa*, and peas. The fallows are ploughed up early in the summer, so that the soil may be exposed to atmospheric influences for a considerable time. There is a marked difference in the quality of the crops between the upper and the lower villages, and even in the lower villages the crops are inferior to those of Láhul.

Agricultural implements.

The Spiti plough (*thóng*) is very like the *bhot shul* of Ránglo in Láhul. The head is 6 inches wide and five inches long and is saddle-backed, hollow underneath, and points downwards to below the level of the body of the plough. Body and tail are of one piece of birch wood, curved, and the handle is set on top of the tail. There are two flanges, set one on each side of the body, and about 1 inch wide, to guide the plough to the proper depth. The shaft (*shólda*) is 7 feet long, to suit the yak. The plough covers the ground rapidly but does not work at all deep. The head (*thóng-chag*) is locally made from about 2 seers of iron, imported from Kulu, and costs Re. 1-8-0. The curved plough costs Rs. 2 and the wood is obtained either from Chika in the Hamta valley or from Póg, below Dángkar. The yoke (*nyá-shing*) for the yaks is a straight bar of willow with holes for the pegs and is fastened with untanned thongs. The weeding tool is a light iron pick (*tóg tsé*) : the winnowing tray (*zhóngpá*) is of wood, imported from Kulu. The levelling instrument (*shála*) is a hurdle of willow-wattle, long and narrow, set with wooden teeth, which easily work out. The fields are not well levelled, a fact which causes unequal germination and maturity. A very rough bill-hook (*zóra*) with a wooden handle is used for reaping.

Yield of crops.

Regarding the yield of crops in Spiti Mr. Coldstream writes in his Settlement Report of 1913 :—

"The local seed measure is the *thé* or *dré*, 20 of which make a *khal*, or sheep load. In every village in which my camp was pitched and in many others the local *thé* was brought out, and its equivalent in weight of the various grains was verified. The following were found to be fair estimates of the weight of a *khal* of the different grains:—

	Seers.
Barley	10
Wheat	12
Peas	12
Sarson	10
China	12
Buckwheat	10

Approximately 3 *khals* of barley seed are required for an acre. The *zamíndárs* were remarkably unanimous regarding the number of *thé* of each kind of grain required to sow a (barley) *khal* of land and regarding the probable outturn.

CHAP. II. Section A.

Yield of crops.

Some experiments were also made at harvest time. The rates of yield per acre justified by the investigation are as follows :—

				Seers.
Barley	...	...	...	300
Wheat	...	...	...	270
Peas	...	...	...	180
Sarson	...	...	...	120
Buckwheat	...	...	...	210
China	...	...	...	288."

Extension of cultivation.

As measured in 1913 at the last revision of the settlement the cultivated area amounted to 2,372 acres. This was 85 per cent. greater than that recorded in 1891. Fields measuring 104 acres were recorded for the first time. This area was not new cultivation but had merely escaped observation in 1891. It appeared certain, however, that no land had been brought under cultivation for the first time since last settlement, except by insignificant extensions of field boundaries. No new water-courses had been constructed and the nature of the country and the customs of its inhabitants make any increase in cultivation almost impossible. Most of the blocks of cultivation are surrounded by walls, and the Settlement Officer was assured that these walls had not been moved in the last twenty years. In some places, large areas within the walls had gone out of cultivation for lack of water Where there are no walls the cultivation shrinks and expands slightly from year to year according to whether the snowfall has been light or heavy. In the Settlement Officer's opinion it was "improbable that the area under crops was greater than the area cropped in 1891 by more than 20 acres (at the most), and certain that no extension of the present area would be profitable." Mr. Diack in his Settlement Report expressed a similar opinion. There is, indeed, little inducement for the owners to increase their estates considering the stationary nature of the population. And here may be noticed another reason for this curious phenomenon of the arrested development of a country which is full of running streams. The superstition of the *loo* or water-spirit is a very strong factor in the country life of Bashahr as well as Spiti, and the ban laid by the *lámás* on tapping new sources of water-supply, coupled with the belief that leprosy will fall upon anyone who dares to offend the *loo*, is enough to shut down permanently the tendency to expand which is a normal feature of all agricultural populations. In spite of it, there is some demand on the part of landless people for waste ground to break up, indicating that something might be made of it : and there are undoubtedly many sources of supply which could be made use of.

Extension of cultivation.

The Spiti people are also not so industrious in agriculture as their neighbours of Lahul, and their methods of conserving and distributing water are capable of improvement. In fact there are too many obstacles in the way of extension of cultivation to allow of any expectations in that direction for many years to come.

Indebtedness of cultivators.

Spiti is too remote for the distribution of Government loans or the formation and inspection of Co-operative Credit Societies. The majority of the headmen and more well-to-do *zamíndárs* lend money at 25 per cent. interest per annum.

Alienation of land.

Regarding sale and mortgage, Mr. Lyall wrote in 1871 : " No instance can be quoted of a landholder having sold the whole or a large part of his holding ; but the custom of selling small portions is said to be ancient. The general idea seems to be that no one could question the validity of the sale of a whole holding, except the son or next heir Two kinds of mortgage are in vogue. By one the land is made over to the mortgagee in lieu of interest till payment of the principal : in the other it is made over for a fixed term, on the calculation that the debt to the mortgagee will be liquidated in full within that time by the produce. The mortgagee ploughs, sows and reaps, but the mortgagor manages the irrigation, and gets the straw for his trouble. Such a thing as an absolute gift of land appears to be unknown, and the general opinion seems to be that no man can give away land to the prejudice of his children, or that if he did do so, the gift ought to be treated as invalid unless they had grievously misbehaved. It seems the general opinion that in future a man ought to be allowed to give away his estate in the absence of any children or brothers or near kinsmen. Formerly the State would have interfered and put forward a claim. It is even now allowed that, in default of heirs or gift, the estate would lapse to the State ; but our Government has hitherto not looked after its rights in this respect, and one or two instances have occurred of such estates being appropriated in late years by the landholders of the village and granted by them to some new man for a sum of money down, which they divided among themselves."

Between 1871 and 1891 only three acres in the whole *wazíri* were transferred by sale, and at the later date only one acre was found under mortgage, the mortgage being of the second of the two classes described by Mr Lyall. In 1912, only 15 acres had been sold since the Settlement of 1891, at an average price of Rs. 133 per acre. The price includes interest on old debts. A curious custom, writes Mr. Coldstream, is for the vendee to pay every year a fixed amount of grain to the vendor out of the produce of the land acquired. This payment is not a part of the price. It may be due to the idea that a complete alienation of land is in theory improper.

DOMESTIC ANIMALS.

CHAP. II. Section A.

Veterinary.

There is no veterinary establishment in Spiti, but in 1915 Lieutenant-Colonel Farmer, the Chief Superintendent, paid a visit to the country. The District Board purchased two yak (*yág*) bulls for breeding purposes and two Chumúrti pony stallions in 1916.

Numbers of livestock.

The following statement shows the livestock counted in 1891 and 1912:—

—	Yaks and hybrid yaks.	Ponies.	Goats.	Sheep.	Asses.
1891 ...	1,006	512	1,117	988	132
1912 ...	1,485	629	2,536	2,337	282

The increase is not of importance, for none of the animals, except ponies, are more numerous than is necessary for domestic and agricultural wants. The people say that while ponies have increased, the numbers of yaks, goats and sheep are the same or nearly the same, as they were twenty years ago.

Yaks.

Pure-bred yaks (the female is called *drimo*) are not bred locally but obtained from Tibet or Ladák. They could be bred in Spiti to the great advantage of the people. They cost ordinarily Rs. 30 and are used for carrying loads, riding and ploughing. They have a rather bison-like appearance, with a girth of about 75 inches and short strong legs : they are slow movers when ploughing and have to be led, thus necessitating an extra man to each plough ; but they can gallop over steep hillsides as if they were half the weight they are. They are usually black, but the tail is frequently white and is sold as a "chowri." Yaks' tails are set up on houses in Spiti to drive away evil spirits. The long hair on the haunches of the yak is shorn periodically, and woven into large bags of a very good strong quality. Yaks do not thrive below 11,000 feet, and there are no wild ones in Spiti. The yak bulls are mated with cows brought from Láhul.

Ponies.

The Spiti man's one source of gain is in the breeding and selling of ponies, but only about half the landowners keep them. A good pony fetches Rs. 120 to Rs. 140 in Simla or Rámpur-Bashahr. But there are few good ponies: the best are gelded and used for riding: there are one or two bad ones kept for breeding, with the result that the stock has deteriorated. In Máné there is a good stallion, and two have been provided by the District Board, so that the quality may improve now. Ordinarily they have very little bone or breeding: they are very sure-footed and are used to living on steep and rocky hillsides. There is considerable traffic with Chumúrti in Tibet, the Spiti men

bartering a full-grown broken-in pony for two Chumúrti colts; one of these they sell, while the second is in turn changed, when fully broken-in, for two more colts. The Chumúrti pony has much more bone than the Spiti animal.

Ponies.

Asses have increased considerably: they are of a fair stamp and are used by traders and also for carrying manure from grazing areas to the fields.

Donkeys.

The Spiti landholders keep only a few sheep or goats, from five to ten per house, which in winter they are obliged to stall-feed. *Pashm* (called *léna* in Tibetan), the soft down used for shawl-making, forms under the coat of sheep, goats, and other animals in Spiti, though to a less extent than in the plateaux of Tibet, the beasts being kept under cover, whereas in Tibet, the snow is never so deep that sheep and goats cannot live in the open air, reaching the grass by scraping away the snow. Both sheep and goats are small. They are kept on account of the *pashm* and the excellent wool they yield, and they are also utilized to carry loads of grain and salt to and from Tibet and Kulu, not for purposes of profit, so much as to satisfy the wants of their owners. A sheep sells for Rs 4 to Rs. 6 or even more, and a goat for rather less. The mutton of Spiti is tender and of excellent quality owing to the good pasturage in the summer and the fact that the flocks are not driven from place to place as they are in Kulu, where they hardly have any rest all the year round and are tough and lean in consequence. The type of goats is a good one and their hair is used for making strong bags and ropes.

Sheep and goats.

The sheep runs in Spiti are valuable, but do not afford grazing in the winter. There are five flocks (*shála*) of Gaddís who graze on the Siti run near the Kúnzom ridge and down to Thácha, the junction of three rivers above Losar. These pay *tírni* to the Thákur of Láhul, who takes one quarter of the collections as in Láhul. The Nono of Spiti claims the right to these collections, but the arrangement is an old one. The Jagatsukh people also have grazing rights near the Kúnzom ridge. A sixth Gaddi flock grazes as far as Kyóto and pays something to the Kyóto people. Otherwise there are no payments for grazing in Spiti and the right cannot bear a tax.

Grazing.

SECTION B.

RENTS, WAGES AND PRICES.

Land-owners cultivate 88 per cent. of the area cultivated. Out of 200 holdings of tenants-at-will, 123 pay half the produce as rent, only 3 pay cash, and the majority of the others pay a fixed produce rent at favourable rates. The average size of a tenant or menial holding is one acre.

Rents.

CHAP. II. Section F.

Wages.

Wages are also at present an unknown quantity. Those paid to the village officials are described in Chapter III, Section C. As in the case of most things in Spiti, wages are governed by custom. Artisans are paid by the job.

Prices.

In 1891 Mr. Diack found that all kinds of grain were sold on the spot to Bashahrís and Tibetans at a uniform rate, at harvest time, of one *khal* of mustard seed for the rupee and two *khals* of each of the other kinds of grain.

Mr. Coldstream in 1913 wrote that prices had apparently risen about 41 per cent. since the previous settlement. The regular cash price of grain had been as follows, of late years (commuting *khals* per rupee in two annas per maund):—

	Annas per maund
Barley	49
Wheat	53
Peas	43
Sarson	128
Buckwheat	43
Chína	36

The value of the gross produce of the harvest of 1912 according to the figures given above was Rs. 47,677.

SECTION C.

Forests.

There are no forests in Spiti : the nature of the tree-growth is described in Chapter I-A.

SECTION D.

Mines and Mineral resources.

There are no mines in Spiti.

SECTION E.

Arts and Manufactures.

Arts and manufactures are described in Chapter I-C above.

SECTION F.

TRADE.

Trade routes.

There are four routes by which trade comes and goes, the Párangla connecting with Ladák and Tibet, the Spiti river leading to Bashahr, the Bhábeh Pass into Bashahr, and the Kúnzom

pass to Láhul, Kulu and Ladák. The only route open all the year round is by the Spiti river; the Bhábeh Pass is usually open but is high. The Párang La is very cold in winter and the Kúnzom is blocked by snow.

CHAP. II. Section G. — Trade routes.

There is a considerable export of grain by way of barter: cash is only taken for grain from five hamlets in Bashahr whose irrigation is unreliable. The grain goes mostly to Tibet and for it comes wool (at 2 seers per rupee) and salt, yaks, wooden cups, knives, amulets (*shrúnga*), turquoises (*yu*), amber, saddles and large praying wheels. Some of these articles are expensive luxuries, and the average *kháng-ch'énpa's* house does not look like a poor man's dwelling. The export of grain is estimated at no less than 500 maunds, the value of which amounts to nearly half of the land revenue (inclusive of grain payments). A little salt finds its way to Kulu, whence come tea, tobacco and iron. From Bashahr come Tibetan articles, wooden pails and vessels, and iron; and from Ladák are imported dyes, soda and yeast. Opium and *charas* are not consumed in Spiti, as far as can be ascertained. Trade is carried chiefly by Tibetan nomads, known as *né khor pa*.

Trade.

SECTION G.

COMMUNICATIONS.

There are no roads properly so called in Spiti, and there were no road-making tools in the country until a few were sent there in 1916. The country however is not difficult to traverse, and there are several bridges both in the main valley and in its tributary nullahs. The main river has two wooden bridges between Kyóto and Morang and near Rangrig. The Public Works Department in 1911 built a suspension bridge over the main river two miles above Ḍángkar on the trade route *viá* the Bhábeh and Párang La passes. This was constructed against a cliff in order to avoid avalanches, but it is exposed to falling rocks, which did much damage in 1914. The road on the Pín side is most dangerous, being a mere path along the cliff. The wooden bridges do not carry cattle and laden animals or flocks. There are birch-rope bridges (*tsázam*) at Máné and lower down, at Pog, but none now at Losar.

Roads.

The main stages are given in Part II, Kulu and Saráj. The approach from Kulu involves marching for four days through uninhabited country and crossing the Hamta and Kúnzom passes as well as the Shigri glacier. This route is closed during the winter. The passes from Bashahr are as follows:—

Rúpi ... ... Between Rúpi, in *iláqa* Pandra-Bís of Kanáwar, and Pín *Kothi*, in

CHAP. II.
Section G.

Roads.

		Spiti; about 17,000 feet elevation. Very steep; bad road on Bashahr side below the highest halting place. The men of Pín barter salt, borax, &c., for iron with the Bashahrís at the upper halting place, which is a small plain.
Bhábeh ...	...	Between the Bhábeh Valley, in Kanáwar, and Pín *Kothi*, in Spiti. An easy pass, practicable for unladen ponies, and used by traders. About 15,000 feet elevation
Lipi ...	...	Between Lipi, in Kanáwar, and Pín *Kothi*, in Spiti; about 18,000 feet elevation. Said to be easy, but not used for more than a hundred years, as its use was prohibited by the Rájás to prevent forays (*see* Gerard).
Mánérang or Ropag Lá	...	Between Máné, in Spiti, and Ropag, in Kanáwar, 18,612 feet elevation. Much snow; road bad on Kanáwar side in some places.

For the first three of these the path goes by the Ḍángkar bridge, and along the left bank of the Pín up the rocky gorge at its mouth; it is a piece of clever though unskilled engineering work, upheld in places by horizontal props driven into the cliff. When the open country is reached, the paths diverge to the three passes.

The path to the fourth pass, the Mánérang, leaves the main road between Ḍángkar and Pog, crossing the river from the left to the right bank by a birch-rope bridge at Máné, which is on the right bank.

Paths from Spiti into Ladák and Chinese Tibet.

The Main Himalaya, which divides Spiti from Ladák and Chinese Tibet, is crossed by the following passes :—

Pángmo Lá ...	...	From Tsárab to Rúbchu in Ladák.
Tágling Lá ...	...	From Kyóto, in Spiti, to Rúbchu, in Ladák; probably about 18,500 feet elevation.
Párang Lá ...	...	From Kyibar, in Spiti, to Rúbchu, in Ladák; elevation 18,500 feet according to Cunningham.

The Mid-Himalaya was crossed between the Pín and Párbati valley in 1884 by Mr. (now Sir) L. W. Dane, and in 1906 by Mr. F. W. Skemp and Major Anderson. The journey is a long and tedious one, and at the summit of the ridge fair weather is a matter of pure luck.

Postal arrangements.

There are no post offices in Spiti, but arrangements are made for conveyance of letters to and from the Nono of Spiti by an *inám* of Rs. 50 given to the Negi of Jagatsukh. Travellers have to make their own arrangements.

Saráis.

There is a sarái at Losar and the Fort at Ḍángkar, but there are no rest-houses.

FAMINE.

Famine in Spiti has never been recorded.

CHAPTER III.—Administrative.

SECTION A.

ADMINISTRATIVE DIVISIONS.

Administrative divisions.

There are five *kothís* in Spiti: Todpá (Tibetan Stód, usually pronounced Tód), Bárshig, Shám, Ch'ózhi and Pín; the four first are in the main valley, the fifth includes the whole valley of the Pín River, and is shut off from the rest of Spiti by high mountains, except where the river forces its way through a deep narrow gorge to join the main stream. Pín thus has well-defined boundaries in the waste, and it is the only one of the five which is so situated. Each *kothí* is made up of a number of hamlets; there is no division into *phátis* as in Kulu. The hamlets of which Shám is composed lie within a fairly defined area on both sides of the Spiti river below its junction with the Pín and forming the south-eastern corner of Spiti as Pín forms the south-western. The villages of Bárshig are within a similar area on both sides of the main river above its junction with the Pín, including the valley of the Lingti on the left bank of the Spiti. The Todpá villages lie to the north of Bárshig in the valleys of the Shila and the Sampa, and along the banks of the main river between these valleys. Boundaries might thus be drawn between these *kothís*, but no object would be gained by doing so, and no boundaries are in fact recognised. *Kothi* Ch'ózhi consists of a cluster of villages in the north-west corner of the valley, and of a number of others or portions of others scattered among those of Todpá, Bárshig and Shám.

SECTION B.

JUDICIAL.

Judicial.

The Nono of Spiti exercises jurisdiction as a Magistrate under the Spiti Frontier Regulation (I of 1878), with power to try all offences except murder, and to punish with fine only. His register shows only one or two cases annually. He is not empowered to try civil cases which are heard by the Assistant Commissioner as Sub-Judge under the Civil Procedure Code: the same officer also hears all revenue cases as Collector.

SECTION C.

LAND REVENUE.

Village Communities and Tenures.

Villages.

In the Settlement Report of 1910-13 will be found a list of the hamlets of which the *kothis* are composed. A kind of boundary

exists between villages which are not separated by any large expanse of waste, that is, such villages have loosely recognized limits within which both exercise separately the right of grazing cattle or cutting grass and wood; but even where such limits are clearest, they do not imply a full property of the soil. The right of the State to grant new holdings in such waste, if it can give water by making a new canal, is not disputed; and where the villages, as is often the case, are far apart, there are no boundaries between them of any kind.

Villages.

Village officials.

There are two kinds of headmen, the *gádpo ch'énmo* ("big headmen") or *lambardárs* of *kothís*, and the *gádpo ch'úngún* ("little headmen") or *lambardárs* of villages. The *gádpo ch'énmo* receive the land revenue from the village *lambardárs* and see that it is correct before they pass it on to the Nono. They also are in charge of the *begár*, and act as a privy council for the Nono in all matters which come before him. They have considerable influence and some of them are men of character. They are selected by the Nono who first takes the opinion of the people and the village *lambardárs*, and such appointments are placed before the Assistant Commissioner for ratification (as in the case of the heads of monasteries). These officials held office at the pleasure of the people, who have been known to depose the whole five of them owing to embezzlement of public funds, but the present incumbents have continued for periods varying from two to seven years, and deposition is rarely resorted to. The village *lambardárs* (*gádpo ch'úngún*) collect the land revenue and send it in to the *gádpo ch'énmo*. They are elected by the people and appointments are not reported to the Assistant Commissioner. They sometimes hold office for more than three years, but are usually changed more frequently. These *lambardárs'* circles comprise one village if it is a large one, or two or three smaller villages.

The remuneration of the *gádpo ch'énmo* was at one time the loan of a horse and 5 *dré* (or *dé*) of barley meal daily, from their *kothí*, when on actual service: this was commuted in 1891 to 40 *khals* of barley per annum. This arrangement was not however accepted by the people and the *gádpo ch'énmo* could only collect 20 *khals*. In 1917 Government made the loss good by assigning to them one-tenth of the land revenue, namely, Rs. 20 each. The *gádpo ch'úngún* get 5 *dé* of meal a day during actual service, and are excused ordinary *begár* but not load-carrying across the passes.

In each village the people take monthly turns at the work of watchman, and are called *lepa* or *laspa*: in Lára and Lídang the turns are of 15 days each. In Pín *kothí* two men (*dele*) are

CHAP. III. Section C.

employed to convey letters across the river and are paid 3 *khals* of barley each per annum, out of the *né-ṭhal* collections.

Begár.

The custom with regard to *begár* is much the same as formerly in Láhul. Ordinary repairs of roads from village to village were at one time performed by the *kháng-ch'énpá* or regular landholders only, the *kháng-chungpá, yang-chungpá,* and *dúd-thúlpá* being called upon to assist only on occasion of extraordinary repairs, but it was decided at Revision of Settlement of 1871 that each house and not each holding should furnish a man for repairs of roads as was the practice in Láhul. For the duty of carrying letters or travellers' baggage across the passes the regular landholders alone are liable, and a roster or roll of turn of duty is kept up. A landholder often gets a *dúd-thúlpá* or other dependent to go in his stead, but the latter is at perfect liberty to refuse, and will not go unless handsomely paid.* So, again, the landholders are primarily liable for all carriage of loads from village to village but when the number of loads is very great, all classes are impressed. Unlike the people of Láhul and Kulu the Spiti men are not great load-carriers, and on such occasions they collect all the ponies and yaks procurable and such loads as must be carried by porters are divided into as small portions as possible

In order to have a store in hand from which to meet the demands of travellers for supplies, about a *khal* of grain is collected from each regular landholder at the commencement of the season; any extra expenses on this or any other common account are met by a rate levied on all regular holdings in Spiti. The rate is uniform, and does not vary with the rates of revenue for different villages. At the end of the season, when all the passes have closed, a meeting is held at Ḍangkar, called the *trálsi-ch'énmo,* or great tax audit, at which the accounts of collections both of revenue and common expenses, are settled. It is attended by the Nono and *gádpos* or *lamburdárs,* and by some fifty deputies from the five *kothís.*

The rights in waste land.

The tenure of the waste is the same as in Láhul; that is to say, the property in such land is the State's, subject to the people's right of user; but the waste land of Spiti is even more valueless to any others but the peasantry than is that of Láhul. As has been observed in the general description of the *wazíri* there is no forest of trees anywhere within its limits, and no attempt has been made to apply the provisions of the Forest Act to any part of it. Notwithstanding this nearly everything that

* As an instance of the price paid to a substitute may be given that fixed for the journey from Kyibar, in Spiti, over the Párangla Pass, to Rúbchú in Ladák, *viz.,* three rupees each, two *khals* or about 50 lbs. barley meal, a large pot of butter, five or six ounces of tea, a pair of boots the loan of sheep to carry the porters' clothes, food, etc.

finds root on the barren hillsides is valuable to the people and is, as has already been remarked, either grazed down or collected and stored as fuel or fodder. Perhaps to this and to the fixed nature of the population as much as to the scarcity of water for irrigation is due the fact that the cultivated area does not increase except by an insignificant amount.

The rights in waste land.

There are some plains or plateaux similar to those occupied by village sites and cultivation which, though apparently capable of being irrigated and cultivated, are kept as fodder reserves and grazing grounds. These are generally regarded as the property of specific villages, but for three of them, *viz.*, the Tháng-mar near Hánsé and the Sérphalong opposite Kyóto, and the Pháldar near Hál, grain rents are paid by the villagers who make use of them to the chief or Nono amounting to two maunds of barley per annum in the case of the first and seven maunds in the case of the other two. Waste land may not be broken up for cultivation without permission obtained from the Nono as the representative of Government.

Tenures of arable lands.

The form of tenure of the fields attached to the villages is the same as in Láhul. Each field belongs to a separate estate or house, and with other fields forms its allotment supposed to have been originally conferred by the State and to be now independently held of it. Owing to the custom of primogeniture which prevails these allotments are never sub-divided. The water used for irrigation has for long past been all allotted, and the present holdings are therefore all of old standing. Within these estates the following occupants may be found: Firstly, in each there is the *kháng-ch'én-pá* (great houseman) or head of the family, who is primarily responsible for the revenue, the *begár* or forced labour, and the share of common expenses demandable on the whole holding. He is the eldest son, but it does not follow that his father must be dead, for by custom of the country the father retires from the headship of the family when his eldest son is of full age and has taken to himself a wife. There are cases in which father and sons agree to live on together in one house, but they are very rare. On each estate there is a kind of dower house with a plot of land attached, to which the father in these cases retires. When installed there, he is called the *kháng-ch'úng-pá* (small houseman). The amount of land attached differs on different estates; where it is big, the *kháng-ch'úng-pá* pays a sum of cash, or cash and grain, about equal to its rateable assessment; but where it is small, as is usually the case, he pays a small cash fee only, which is really rather a hearth-tax than a share of the land-revenue, to which, however, it is credited in collection.

CHAP. III. Section C.

Tenures of arable lands.

The *kháng-ch'úng-pá* is not liable for any share of common expenses (a heavy charge in Spiti), nor for performance of *begár* or forced labour. On occasions of a great demand for men to do some work near the village he may be impressed, but the principle is that he is free. Sometimes, in the absence of a living father, the widowed mother, or the grandfather, or an uncle, aunt, or unmarried sister, occupies the small house and land on the same terms. *Yáng-ch'úng-pá* is the term used to describe a person living on an estate in a separate house of lower degree than that of the *kháng-ch'úng-pá*. Such a person is always some relation of the head of the family; he may be the grandfather who has been pushed out of the small house by the retirement of his own son, the father, but it is commoner to find unmarried sisters, aunts, or their illegitimate offspring in this position.* A small plot of land is generally attached to the house, and a few annas of revenue paid, but rather as a hearth-tax on account of grass, wood, water, etc., than as the share of the revenue on the plot held. In proof of this some *yáng ch'úng-pás* have no land attached to the house, but pay like the others. Most of these people would be entitled to some maintenance from the head of the family if he did not give them a plot of land. They are not liable to be impressed for ordinary *begár*, but must help on occasions of great demand near home. They often do distant *begár*, however, in place of the head of the family by mutual agreement. On many holdings another class of people are found living in a dependent position towards the *kháng-ch'én-pá* or head of the family. They have a small house to themselves, with or without a patch of land attached; generally they pay an anna or two to revenue, whether they hold land or not. In fact in this respect, and with regard to liability to *begár*, they are much on the same footing as the *yáng-ch'úng-pá*; the fundamental difference is that they are not related to the head of the family, and have got their house or house and land, not with reference to any claim to maintenance but out of favour, or for the mutual benefit of both parties They are, therefore, expected to do a great deal of field work for him. People of this class are called *dúd-thúl-pá*, literally "clothed in smoke," because they have a hearth to themselves, but no other interest in the land. To mark the fact that they hold of one particular landholder, the word *ráng*, meaning private or particular, is added. All the land held by the *kháng-chúng-pá* and by *yáng-ch'úng-pá* and *ráng dúd-thúlpá* pertains to the holding or allotment, cannot be alienated, and lapses to the *kháng*

* In Pín *kothi* the *búzhen* families, who are the descendants of monks of an order in which marriage is permissible, commonly hold a house and small plot from the family from which they spring, and are in the position of *yáng-ch'úng-pás*.

ch'én-pá. The latter could not of course evict a *kháng-ch'úng-pá*, and the general feeling is that when he has once given a plot to a *yang-chúng-pá*, he could not resume it, except with consent; but he could resume from a *ráng dúd-thúl-pá* and would be considered quite justified in so doing on the grounds of customary service not having been properly performed. That is, he could resume the plot of land, but apparently he could not always evict from the house, as that has sometimes been built by the *dúd-thúl-pá* himself.

Tenures of arable lands.

In most holdings also a plot of from one to half a *khal* will be found in the occupation of the *láma*, brother or uncle of the head of the family, see page 264. It is ploughed and sown by the latter, but the *láma* provides the seed and gets the whole produce. There are *lámás* in almost every family, as all younger sons of the landholders are forced by custom to enter the monasteries. This maintenance land of a *láma* is called *drá-zhing* (*dázhing*) and reverts, of course, to the head of the family on the death of the *láma*.

Holdings other than those of the revenue-paying landholders.

There are some fields at Ḍángkar attached to the old fort there, which are like it the property of Government. The Nono, in virtue of his office, provides for the cultivation of the fields, and takes the produce. He is bound in return to keep the fort in repair. The Nono also holds other lands equal to several ordinary holdings in extent, which are his ancestral property; they are rent-free, and are mostly situated at Kyúling, where he resides. The Pín Nono also has rent-free land, but not more than equal to an ordinary holding in extent. At Tráshigáng a family of hereditary astrologers (*chóba*) hold two allotments granted to them by the kings of Ladák free of demand for revenue or *begár*.* Four families of blacksmiths also hold a rather small allotment apiece, and pay only a hearth-tax, not full revenue. The above are all independent estates of the same grade as those of the revenue-paying landholders, and inherited in the same way by the eldest son.

Fields excluded from the regular household allotment.

There are two families who, in addition to their revenue-paying allotments, also hold good-sized plots rent-free under the name of *mánzhing*: they are *ámchi* or *'árje*, hereditary practisers of the art of medicine, and this land was granted to them in support of the art. The general opinion is that if they abandon the art, the *mánzhing* or physician's field could be taken from them and transferred to another. Many of the landholders practise medicine, but only these two families hold *mánzhing*.

* The phraseology of the deed of grant is curious. It is drawn up and attested by officials with high sounding titles, signed and sealed, at 'our palace,' &c., and promises that the grant shall endure till the feathers of the raven turn white and the snow on the mountains black.

CHAP. III. Section C.

Fields excluded from the regular household allotment.

Certain fields are the full property of the monasteries: they pay no revenue, and are generally either near the monastery to which they belong, or in adjacent villages. The land of the Ḍángkar monastery is cultivated by six tenants, landholders in Ḍángkar, who pay half produce as rent; that of the Pín monastery is cultivated gratuitously by the Nono of Pín; the men of Ch'ózhi *kothi*, as the special clients of the monks, cultivate the lands of the other monasteries, but the monks are expected to give the men who actually do the work something for their trouble. In many villages there are one or two fields known as *lhá·zhing* or god-land attached to the village *lhá·khǽng* or temple. These are not released from land revenue and are considered to be the common property of the village. One of the landholders or other residents cultivates them, and pays a fixed rent which is applied to lighting the temple with lamps, or to the expenses of occasional feasts. Such a tenant can be evicted by a vote of community; sometimes all the landholders unite to cultivate these fields, and the whole produce goes to the temple expenses. Some of these temples are served by a *láma* nominated by the *zamíndárs*, others by the *zamíndárs* themselves. In many villages there are fields known as *yúrzhing*, or canal land, the produce of which, as in Láhul, is devoted to a feast at the time of annual canal repairs; these also should be considered the common property of the community. *Kuhl chowkídárs* are called *chúnpa*. In all villages there are some persons known as *zúrwa*, that is, village *dúd-thúlpá*, who own a house and small field attached which they have reclaimed from the waste with the consent of the village community; some few have no field, but all pay a small fee towards the revenue of the village by way of hearth-tax. They could not be evicted, as the land was given them to induce them to settle permanently in the village, and on that understanding they have built their house and broken up the waste.

LAND REVENUE.

Nature of rent or land-tax under the Rájás in Spiti.

According to Major Hay, the king or *gyálpo* of Ladák prior to 1839 took as revenue for Spiti Rs. 396 cash, 200 *khals* of grain, 100 *mandís* or iron crow-bars, 34 pieces of Barhmaur cloth, and 132 reams (*shúgu*) of paper. The crow-bars, or the iron to make them, came from Bashahr, and were paid for out of a common fund; the other manufactured articles can be made in every house in the country. The paper was made from the fibre of a small plant or grass which grows wild in abundance. The cloth is of very close texture, and very lasting. Spiti also paid a tribute of trifling amount to the Rájás of Bashahr and Kulu, not in recognition in any sense of their sovereignty, but for the privilege of free access for trading purposes.

CHAP. III. Section G.

Nature of rent or land tax under the Rájás in Spiti.

Major Hay's account is generally accurate, but there are some mistakes in it, principally with regard to the grain revenue. Each holding was assessed with a fixed number of measures of grain. Those assigned to the monasteries paid in grain only at from fifteen to twenty *lákhs* each, and formed *Kothí* Ch'ózhi; those in other or *khálsa kothís* paid a little grain, and also sums of cash, cloth, and paper, but the last two items were not assessed on all holdings. The cash assessment of all the holdings in a village was, with very few exceptions, the same, though the holdings seem to have always differed to some extent in size; the grain assessment varied from one to ten *khals* according to the amount and quality of the land held. The grain items in *khálsa kothís* also had in many cases been from time to time assigned to monasteries. All the assigned grain was called *bón*, the unassigned grain was called *né-thal* or barley tax.* The amount collected under the latter name on the king's account must have been more than 200 *khals;* but probably those figures represent correctly the amount which went to Ladák, for the greater part of the grain collections were spent year by year in Spiti in the king's name on certain annual ceremonies and State charges. This was the old state of things, which Major Hay evidently did not fully comprehend, for he states in his report that 50 Chinese families, settled in Spiti, paid a tribute to China of 200 *khals* of grain, and that an envoy from Tolang came to fetch it every year. Again, in another place, he mentions that the aforesaid Chinese families go by the name of Chuzi, and present annually 200 *lákhs* to the chief monastery of Spiti. In reality the Chuzi families were not Chinese, but the men of Ch'ózhi *kothi*, the revenue of which was assigned to monasteries. One of these monasteries, to which something less than 200 *khals* were assigned, was at Tolang in Chinese Tibet; hence the story of tribute to China.

Sikh revenue administration.

From 1839 to 1845 the Sikh *thánádár* at Ladák took the revenue of Spiti. For the first four years Rs. 2,000, *plus* two ponies and 25 sheep, were exacted annually. For the last three years the cash was reduced to Rs. 1,031, but 100 iron crow-bars were added, and the number of sheep increased to sixty. A Sikh force also plundered the valley in these years. In the autumn of 1846 Mr. Vans-Agnew made a Summary Settlement, that is, he fixed the amount of revenue to be paid to Government at Rs. 753. No records were compiled of any kind, nor was any report submitted. When relieved of the pressure of the Sikh exactions, the Spiti people at once reverted to their old fiscal arrangements. Mr. Vans-Agnew probably knew nothing of the grain revenue assigned to the monasteries, as he merely passed quickly through

Summary and Regular Settlements.

*From *nas* (pronounced *né*) "barley" and "*thal*" tax.

Summary and Regular Settlements.

a part of the country; and if he knew of the unassigned grain, he, no doubt, intended to abandon it. But the people considered the Rs. 753 to be in place only of the cash, cloth, and iron formerly paid to the kings of Ladák, and divided it accordingly with strict regard to the old fixed assessment. The assigned grain or *bón* they paid as before to the monasteries, and the unassigned grain or *né-thal* to the representative of Government, who for the first three years was a *wazír* of the Bashahr Rája,* and after that was the hereditary *wazír* of Spiti, commonly called the Nono. Most of it the Nono expended in the manner customary in time of the kings of Ladák. The balance he appropriated as a perquisite of office. This balance was not very large, as the amount paid by each holding was somewhat reduced when the Nono took charge. At the Regular Settlement in 1851-52 Mr. Barnes maintained the Government demand at the amount fixed by Mr. Vans-Agnew; he remained unaware of the grain payments, for he never visited Spiti, and relied upon Major Hay's report for his information, which in this respect was erroneous. He, however, sent up a *tahsíldár* to make out a rough kind of rent-roll or *khewat*. This official roughly divided the Rs. 753 upon all five *kothís* with reference to the number of holdings in each. He must have heard of the grain payment, but he was in a great hurry, and seems to have considered that they could not be taken into account; so, without making any report to Mr. Barnes, he made the holdings in Ch'ózhi pay as much cash as those of other *kothís*, though they paid ten times as much grain. Not to pay the grain to the monasteries would have been sacrilege, and would have been resented by the whole community, so the Ch'ózhi men paid the grain as before, though with much grumbling, which no officer of Government seems to have heard or understood.

First revision of Settlement.

In 1862 Mr. Lyall submitted a report, in which he recommended that the *bón* or assigned grain, with that part of the *né-thal* or unassigned grain which was annually devoted to religious purposes, should be lumped together, and the sum total redistributed equally by the people on all holdings, that the remainder of the *né-thal* should be remitted, and the Nono remunerated for the loss of this and other unauthorized collections by an *inám* or grant out of the revenue of Rs. 100 or 150. These proposals were not fully understood by officers who had never seen the country, and no definite orders were passed for some years. Eventually the Nono was given an *inám*, and informed that he must not collect the *né-thal*; the monasteries were left to collect the *bón* as before, but it was not formally at least recog-

* The 400 *lákhs* grain which Major Hay mentions as taken by the *wazírs* in excess of Rs. 753 in 1848, and as collected again in 1848, were the *né-thal* collections not the produce of the Government land at *Dánqkar*.

nized as assigned revenue. This did not relieve the Ch'ózhi men of their grievance, but in fact made it worse by comparison, for it was the *khálsa kothis* to whom the *né-thal* was remitted. Mr. Forsyth, the Commissioner of the Division, again represented their case to Government in 1866, and as Revision of Settlement had then commenced, Mr. Lyall was directed to go to Spiti and redistribute the revenue so as to get rid of their grievance. Mr. Forsyth also recommended the revival of a part of the *né-thal* collections (which had practically ceased only for a year or two) to form a fund from which to pay the *lambardárs* of *kothis*, and the grant of an increased *inám* at six annas in the rupee on the revenue of Spiti to the Nono. These proposals were approved. Eventually Mr. Lyall completely revised the *né-thal* collections and drew up a plan for its expenditure which embodied ancient custom for the most part, but introduced an allowance of 40 *khals* to each of the five *gádpos* or headmen of *kothis*. The grievance of the men of Ch'ózhi *kothi* was removed by redistribution of the cash assessment; more than half their cash revenue being taken off their shoulders and distributed upon the other *kothis*. The plan for the expenditure of the *né-thal* was as follows:—

		Khal.	*Ḍé.*
(1)	Expenditure on the Námgan Ch'énmo Fair ...	50	11
(2)	Grant to the Ḍángkar *lámás*	30	0
(3)	Consumed by the leading men of Spiti when they meet to settle accounts	20	0
(4)	Expenditure on the Ḍángkar November Fair	50	0
(5)	Allowance to *gádpo ch'énmo* (in lieu of miscellaneous perquisites)	200	0
(6)	Expenditure on a third fair	20	0
(7)	Allowance to the *Tóbóché* or *patwári* ...	40	0
(8)	Do. to an interpreter	40	0
(9)	Do. to two *chaukídárs* in Pín *kothi* ...	6	0
	Total ...	456	11

The result of the operations at revision in 1871 was a revenue composed as follows:—

	Rs.	
Cash	792	(*khálsa* Rs. 753, assigned Rs. 39).
Né-thal 456 *khals*, equivalent to	228	at 8 annas per *khal*.
Bón ... 1,462 „ „ „	731	
Total cash ...	1,751	

CHAP. III. Section C. — Revision of Settlement of 1891.

At the second Revision of Settlement in 1891 it was found that while the total amount of cash revenue remained as fixed in 1871 the amount of *né-thal* and *bón* collected differed from the amount then fixed. As regards the *né-thal* the *kothi gád-pos* had been left to collect their annual allowance of 4[illegible] *khals* of barley a head themselves without assistance from the Nono or the village *gádpos* who collect the cash revenue and the remainder of the *né-thal*, with the result that they were able to levy only 122 instead of 200 *khals*. Of the balance of the *né-thal* only 243 *khals* were realized, so that the *né-thal* collections amounted to 365 *khals* (cash value Rs. 183) in place of the 457 *khals* fixed at revision. On the other hand, the quantity of *bón* collected on account of the old cultivation was found to be more than the amount stated above by 264 *khals*.

The half net asset revenue was worked out at Rs. [illegible],726, or double the collections in grain and cash. But it was clear that such an assessment—higher than that of many of the rich villages in the Kulu tahsil—could not be imposed in a country like Spiti, where the crops are inferior, the grazing ground is limited, fuel and fodder are scarce, building timber is almost unobtainable, and the inhabitants have not derived, and are never likely to derive, any advantage from the development of trade which has occurred elsewhere under British rule. The conclusion arrived at in 1891 after a careful inspection of the Spiti villages was that no increase should be taken on the existing revenue except on account of new cultivation.

The allowances to the monasteries were maintained at the amount they were then found to be. Those of the Kyí, Thánggyud and Dangkar monasteries had only been slightly modified since the revision of 1871, while that of Tábo remained unaltered, and it was clear that the *bón* of the Pín monastery had previously been understated. Where new cultivation was found paying a grain assessment to a monastery the payment was continued as *bón*, and an allowance was made for this in the calculation of the additional cash *khálsa* assessment. As the result of these changes and additions, the amount of the proposed assessment composed of assigned grain stood at 1,701 *khals*, value Rs. 851, as compared with 1,462 *khals*, value Rs. 731, at the revision of 1871. It may here be noted that *né-thal* and *bón* are practically synonymous, the former meaning "grain tax" and the latter "debt," "obligation." *Bón* is applied by the people to both the secular and the religious payment, the former being distinguished as *khargyi bón* or the "fort due" and the latter as *gónpai bón*, or the "monastery due."

As Government has no great interest in the *né-thal* the decrease that had occurred might have been accepted, but that

the *gádpo ch'énmo* would have been the chief sufferers. The five *gádpo ch'énmo* were required to abandon certain perquisites in consideration of receiving each a grain allowance of 40 *khals* from the *né-thal*; and it was ascertained that they had actually abandoned these perquisites. It was therefore decided to restore the *né-thal* to the full amount fixed at revision, and to direct the Nono to realize the 200 *khals* for the *gádpo ch'énmo* along with the rest of the *né-thal* in future, and to consider their allowances a first charge on the fund. None of the new cultivation was found charged with any *né-thal* payment. The portion of the proposed assessment consisting of *né-thal* was the same as was fixed at the first revision, 457 *khals*, value Rs. 229.

The cash assessment of 1891 amounted to Rs. 824, including the revenue on new cultivation and the sum to which the grain payment to the Pítug monastery in Ladák was commuted, an increase of 4 per cent. on the revision cash *jama*. The total value of the revenue was —

	Rs.
Cash	824
Né-thal	229
Bón	850
Total... ...	1,903

an increase of 9 per cent. on the value of the revenue, Rs. 1,751, as estimated at revision, but of 3 per cent. only on the value of the actual revenue paid, Rs. 1,851, supposing the Pín monastery contribution to have been then levied, but concealed. The incidence of the revenue of 1891 was Re. 1-7-9 per acre of cultivation.

In accordance with a universally expressed desire, not only the cash revenue, but also the *né-thal* and the *bón* were distributed within the villages not as previously by *khangch'én pas'* holdings with little or no reference to area, but according to the area of each holding. As the result of this it was arranged that the *bón* which had hitherto been collected direct from the people by the *Lámás* should in future be collected by the village *gádpo* who collects the rest of the land revenue.

Cesses were imposed at the revision of 1891 amounting to 8 per cent. on the land revenue, of which 6¼ per cent. represented the Nono's *pachotra* and the remainder a school and *harkára* cess. Subsequently, on the imposition of a local rate in the district, the amount due on this account on the revenue of Spiti was calculated and demanded, but as there was no *patwári* or other revenue official in the *wazíri*, and none went there to effect a distribution of the rate, the Nono devoted his *pachotra* to the payment of part of it, realizing the balance from the *kothi* common funds.

CHAP. III. Section C.

Of the cash revenue of Rs. 824 assessed on a total cultivated area of 1,287 acres the amount payable to Government was fixed in 1891 at Rs. 1,781 assessed on an area of 1,228 acres, the revenue, Rs. 43, of the remaining area of 59 acres, being assigned.

Settlement of 1912.

In the summer of 1912 measurement of the cultivation was begun, for the first time in the history of Spiti. In mapping, the instructions of the Settlement Officer were exceeded and useful maps founded on measured base lines were drawn to scale. This mapping made a great impression on the Spiti people, and the Settlement Officer found that they were more ready to disclose facts, particularly regarding payments to monasteries than before. "Now that the measuring chain" they said "has come to Spiti, nothing can possibly be hidden, and each *kháng-ch'énpá* has been ordered to say what is true."

The revision of the records disclosed great discrepancies between sanctioned arrangements and prevailing practice. In no case had the distribution over holdings, either of the cash or of the grain revenue, been acted upon. The cash revenue paid by each hamlet was the amount fixed in 1891, but it was paid in accordance with the people's ideas of the comparative value of the original holdings of the proprietors, which had long ago ceased to correspond with the area or value of the holdings at the time being.

The *né-thal* actually collected was found to amount to 308 *khals*. The Nono's account showed a total expenditure of 277 *khals* only, against 456 *khals* 11 *dé*, the amount provided for in 1891. Expenditure on the great fair was greater by 9 *dé*, while the *gádpo ch'énmo* had received 100 *khals* less than their due, and the *patwári* and interpreter had obtained no grain payments at all. The remaining 31 *khals* out of the 308 collected were found to be spent on messengers and the Ḍángkar fair, according to requirements.

The most important divergence between record and practice was in respect of the *bón* collections, which instead of the sanctioned 1,676 *khals* 10 *dé* amounted to 2,661 *khals* 5 *dé*. The differences are shown below :—

Kothí.	Entered in revenue records.		Actually found to be paid in 1912.	
	Khal.	*De.*	*Khal.*	*De.*
Ch'ózhi	851	3	1,577	4
Shám	204	15	261	1
Tód	77	2	194	11
Bárahig	231	10	342	6
Pín	312	0	286	3

Settlement of 1912.

This *bón* had been allotted as follows:—

	By revenue records.		By practice.	
	Khal.	*Dé.*	*Khal.*	*Dé.*
Dángkar Gónpa	867	0	474	13½
Tábo	199	0	244	9½
Kyí	446	0	981	3
Tháng Gyúd	374	0	729	11
Pín	242	0	231	8
Owners* in Pín *Kothí*	25	0	(64)	0
Astrologers †	32	0	...	...
Total	1,685	0	2,725	5

Mr. Diack resumed one revenue assignment in 1891, but the resumption was disregarded. The assignee refused to pay revenue and the Nono had regularly made up the deficiency out of his own pocket, a fact, however, of which he was unaware until 1912. Lastly although by the revision of the assessment the Nono's remuneration (6 annas in the rupee of land revenue) had been raised from Rs. 282 to Rs. 293 in 1891, this was discovered by the Nono only in 1905, when the Assistant Commissioner got refunded to him the excess paid into the treasury between 1892 and 1904.

The amount now declared assumed to be correct.

All possible precautions were taken to verify the payments of *bón*. Every landowner or one of his family was questioned separately and always knew how much was paid by his holding. His statement was corroborated by other owners in the hamlet. After some difficulty, the monastery records were procured and examined. These were always in a very confused state, being only a mass of tattered manuscripts packed without any order into leather boxes In no case were records of 1871, 1891 and the monastery accounts all forthcoming. The heads of the monasteries declared they knew nothing about the records and that their own accounts were inaccurate. At Dángkar a darbár was held by the Settlement Officer at which the abbots of all the monasteries, the Nono and his servants, the *patwári* and the majo-

* In Kothí Pín certain hamlets contribute altogether 64 *khals* as a subscription to the Pin horse fair. This was the only trace of any *kothí* fund evident in 1912.

† The hamlet of Tráshigáng (Tód) is a *mu'áfi* in favour of medicine men, who also get 17 *khals* of barley assigned in Kázá (Bárshig). The Tráshigáng land was supposed to measure 17 *khals*.

CHAP. III. Section C.

The amount now declared assumed to be correct.

rity of the landowners were present. Mr. Peter, Superintendent of the Moravian Mission, gave most useful help as an additional interpreter. Thus many doubtful matters were discussed and cleared up in public. It was asserted that so far as grain collections were concerned, the only significant change that had occurred since Spiti became British territory, was made in the time of Major Hay (1853—57) when certain monasteries agreed to collect a fifth less than before because the people were very poor. The monastery accounts, however, dated from before this time, and thus the discrepancy between the monastery accounts and the statements of the people was explained. The latter were, it was agreed by all, correct. The people also admitted that, whatever cash revenue was imposed, they would be bound by their religion to continue paying *bón* at the existing rates to the monasteries.

The present demand.

As regards power to pay the revenue the *wazíri* appeared to be in the same condition as it was in 1891. The people were contented, had sufficient food, and spent nothing on litigation or the tours of subordinate officials. On the other hand they had no more surplus cash than they had before and the numbers of cattle, sheep and goats were not more than enough to meet domestic wants. Certainly prices of grain and ponies had risen, but on the other hand an equal rise had taken place in the prices of tobacco, or other luxuries and grain for the poorer hamlets, which are imported from Kulu. A considerable quantity of the harvest is required for beer and spirits. Circumstances were, in short, similar to those of the time when Mr. Barnes wrote "owing to the political position of the country, which is placed on the remote frontier of our territory, it is advisable to keep the *jama* as light as possible. Any increase would be so objectless."

Accordingly no attempt was made by Mr. Coldstream to raise the revenue generally above what he found it to be. Valuing the grain collections (*bón* and *né-thai*) at 13 *sers* per rupee the revenue paid was found equivalent to Rs. 3,108 or Re. 1-5-0 per acre of cultivation. While refraining from enhancing the demand in deference to the apparent increase in the 'net assets' of the *wazíri*, the Settlement Officer took advantage of the discovery of holdings hitherto not recorded to add small sums to the cash assessment of several villages. Thus the inequality of the distribution of the previous demand was to a small extent remedied. Unfortunately, however, more than half of the newly recorded cultivation was in *kothí* Ch'ózhi, the gross revenue of which was already comparatively high and adequate. The increase imposed was not with regard to any assumed "*taluqa*" rate, but was varied according to the incidence

of the previous demand. The resulting revenue stands as follows :—

The present demand.

Kothi.	Cash.	*Bón.*	*Né-thal.*
	Rs.	*Khals.*	*Khals.*
Ch'ózhi	121	1,577	6
Shám	207	261	113
Tód	173	195	91
Bárshig	185	342	56
Pín	248	286	42
Total ..	984	2,661	308

The incidence of the nominal demand on the cultivated area is Re. 1-5-8 per acre.

The distribution of the *jama* between hamlets is still far from regular. This is most noticeable where one hamlet pays revenue in more than one *kothi* and the areas belonging to the different *kothís* are treated as separate hamlets. But at the darbár at Ḍángkar described above the people expressed a strong desire that no attempt should be made to alter the existing custom unless this was really necessary. But the distribution of both cash and grain revenue within the hamlets is according to area in the records. The new demand was announced in Spiti in September 1912. The revenue for the year ending on the 30th September is paid in October or November of the same year. The new demand was collected with effect from the autumn of 1913.

Cesses, etc.

The cesses taken in Spiti are as follows :—

Local rate ... ... Rs. 7-8-10 per cent. of the land revenue.

Pachotra to the Nono ... Rs. 5 per cent.

SECTION D.

EDUCATION AND MEDICAL.

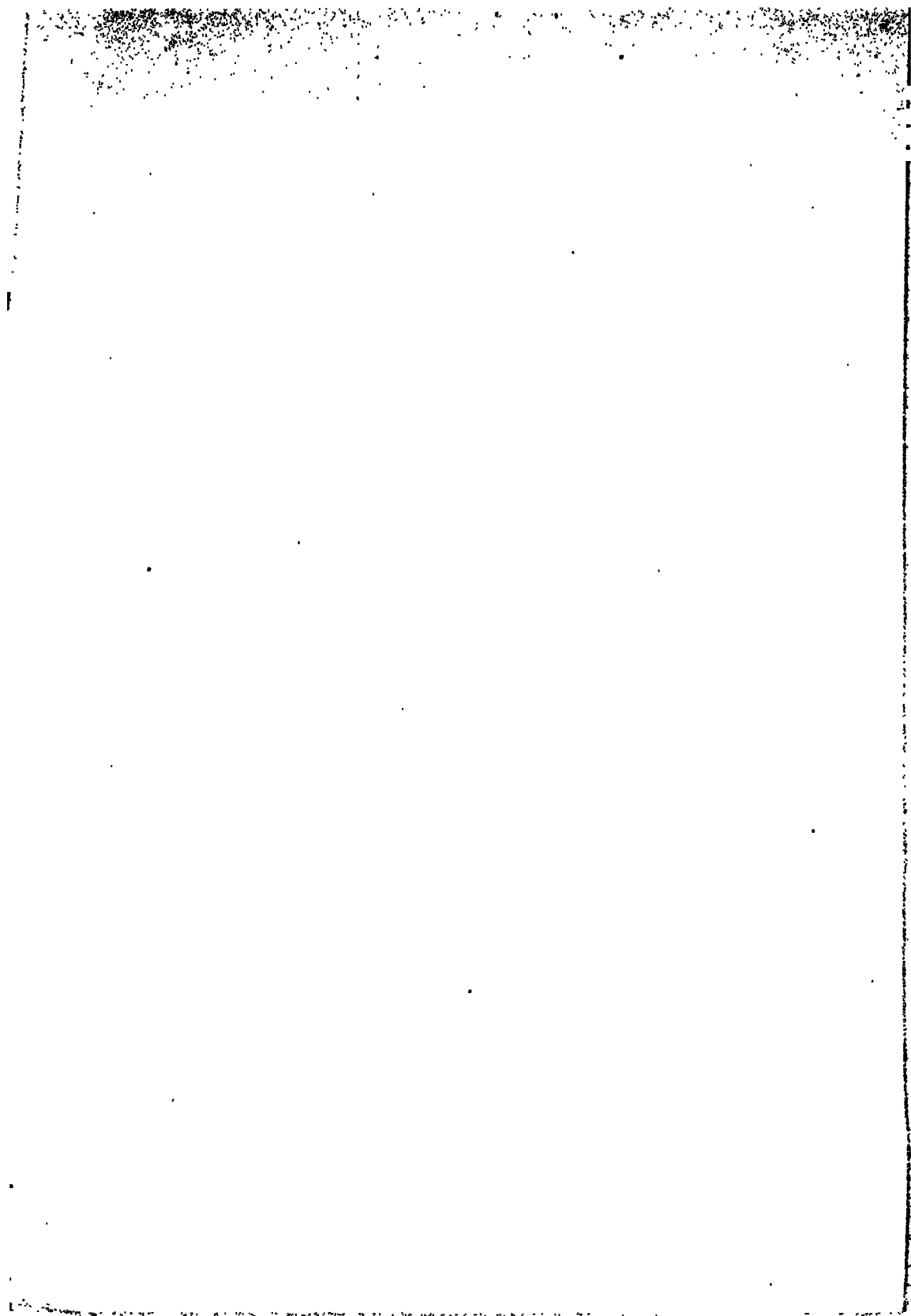
Education.

There are no schools kept up or aided by the District Board, but in all monasteries reading and writing of Tibetan is taught, with the result that many landowners can read their own revenue

CHAP. III. Section D. — Education.

entries. There is much money-lending and the accounts are kept in Tibetan. Only two or three men understand Urdu, and they do not include the present Nono. Three or four Spiti boys generally attend the Naggar school in winter, and it is hoped to give them education all the year round in Láhul.

Medical.

There are no medical arrangements for Spiti, but Moravian Missionaries from Poo in Bashahr generally pay a visit to the lower part of the valley in the summer and treat any ailments they find, the Kyélang Missionary doing the same for the upper valley.

Appendix I.

1. Map of Kulu and Saráj, showing Assessment Circles, *kothis*, etc.
2. Map of Kulu and Saráj, showing Post Offices and Schools.
3. Map of Láhul.
4. Map of Spiti.
5. Geological Map.

Appendix II.

Mammals and Birds of Kulu.

Serial No.	Scientific name.	English name.	Kulu name.	Period of protection, if any.
		A.—Mammals.		
1	Capra siberica ...	Himalayan ibex ...	Trangol ... Kin (Láhul).	Females, the whole year; males, the whole year except in accordance with the rules published in Punjab Government notification No. 1892-S. (Forests), dated 5th September 1916.
2	Hemitragus jemlaicus	Thar ...	Kart. Mehi, F.	
3	Ovis Hodgsoni ...	Great Tibetan sheep ("Ovis Ammon").	Niáu.	
4	Ovis nahura ...	Barhal ...	Miátu.	
5	Cemas goral ...	Goral ...	Gudh, gurrar, gurral, ban bakri.	
6	Moschus moschiferus	Musk deer ...	Bina, kastura, ráonwi.	
7	Nemorhoedus bubalinus.	Himalayan goat antelope, or serow.	Emru, yamu.	
8	Cervulus muntjac ...	Barking deer ...	Kakar ...	Females, whole year, males 1st January to 31st March
9	Ursus isabellinus ...	Red bear ...	Ratta bhalu, bhrid (sheepkiller), bhrábhu.	Females with cubs at foot, and cubs, the whole year; others 1st July to 30th September.
10	Ursus torquatus	Black bear ...	Richh, ghabi ...	*Nil.*
11	Macacus rhesus ...	Brown monkey ...	Bandar, Hanumán	...
12	Semnopithecus schistaceus.	Himalayan grey ape	Gúni ...	...
13	Felis uncia ...	Snow leopard ...	Shián ...	...
14	Felis pardus ...	Panther ...	Birág, virthi ...	...
15	Felis bengalensis ...	Leopard cat ...	Chenag ...	...
16	Felis chaus ...	Jungle cat ...	Ban brala ...	...
17	Felis lynx isabellinus	Lynx ...	(Láhul only) ...	...
18	Felis caracal ...	Caracal ...	...	...
19	Canis lupus ...	Tibetan grey wolf ...	Charg, Buh ...	...
20	Canis lupus (varniger).	Black wolf ...	Shánku. Nagpo ...	...
21	Canis aureus ...	Jackal ...	Ghidar, Lindislal ...	...
22	Canis dukhunensis ...	Wilddog ...	...	...
23	Vulpes montanus ...	Hill fox ...	Lumar ...	...
24	Hyaena striatus ...	Hyaena ...	Tharruk ...	...
25	Paradoxurus musanga	Civet cat ...	...	...

Mammals and Birds of Kulu—concluded.

Serial No.	Scientific name.	English name.	Kulu name.	Period of protection, if any.
	A—MAMMALS—*concluded.*			
26	Paradoxurus grayii	Hill civet cat ...	Bansokar ...	...
27	Martes Abietum ...	Pine marten ...	Góthu, dhinkhlu ...	...
28	Mustela hodgsoni ...	Himalayan weasel ...	Naol ...	...
29	Lutra nair ...	Indian otter ...	Udar ...	...
30	Lutra leptonyx ...	Toeless otter ...	Do. ...	...
31	Lepus ruficaudatus ...	Common Indian hare	Phalru ...	1st April – 15th September.
32	Sus cristatus ...	Indian wild boar ...	Sur ...	*Nil.*
33	Hystrix leucora ...	Porcupine ...	Shahi, shial ...	...
34	Pteromys inornatus	Large red flying squirrel.	In, Ain ...	...
35	Sciuropterus fimbriatus.	Smaller Kashmir flying squirrel.	...	...
36	Pteropus giganteus ...	Flying fox ...	Tumle. Kao, ulte kap	...

B.—BIRDS.

(*i*) *Game Birds.*

Serial No.	Scientific name.	English name.	Vernacular name.	Period of protection, if any.
1	Arboricola torqueola	Common hill partridge.	Ban titar ...	1st March—15th September.
2	Francolinus vulgaris	*Black partridge* ...	*Kala titar* ..	*1st April—15th September.*
3	Caccab's Chukor ...	Chikor ...	Chakura ...	*1st March—15th September.*
4	Perdicula Asiatica ..	Jungle bush quail ...	Lowa ...	1st May—31st August.
5	Coturnix coturnix ..	Grey quail ...	Dhedu. Chákru ...	*Nil.*
6	Columba intermedia	Blue rock pigeon ...	Kabutar ...	...
7	Sphenocerus sphenurus.	Green pigeon ...	Kokla, gugu ...	1st March—15th September.
8	Columba leuconota ...	Snow pigeon ...	Bhujli ...	Ditto.
9	Tetraogallus himalayensis.	Himalayan snow-cock.	Golind ...	Ditto.
10	Lerva nivicola ...	Snow partridge ...	Ram chikuru ...	Ditto.

(i) *Game Birds*—concluded.

Serial No.	Scientific name.	English name.	Vernacular name.	Period of protection, if any.
11	Tragopan melonocephalus.	Tragopan, or Western horned pheasant.	Jijuráma phalgugal, Bodal, F.	1st March—15th September.
12	Lophophorus refulgens.	Monal pheasant ...	Munál, newal ... Karrari, F.	Ditto.
13	Catreus Wallichii ...	Cheer pheasant ...	Chaman. Chaha ...	Ditto.
14	Pucrasia macrolopha	Koklass pheasant ...	Khwakta, khwakti, F.	Ditto.
15	Gennaeus albocristatus	White-crested Kalij pheasant.	Kalesha, kaleshi, F.	Ditto.
16	Anser anser ...	Grey Lag goose ...	Magh ...	*Nil.*
17	Anser indicus ..	Bar-headed goose ...	Magh ...	...
18	Nettopus coromandelianus.	Cotton teal ...	Murghabi, abi ...	...
19	Polionetta paecilorhyncа.	Spot bill ...	Ditto ...	...
20	Nettium crecca ...	Common teal ..	Ditto ...	..
21	Querquedula cricia ...	Garganey teal ...	Ditto ...	...
22	Mareca penelope ...	Widgeon ...	Ditto ..	...
23	Chaulelasmus streperus	Gadwall ...	Murgabi ...	...
24	Spatula clypeata ...	Shoveller ...	..	...
25	Anas boscas ..	Mallard, M. Wild Duck, F. ...	...	...
26	Marmaronetta angustirostris.	Marbled duck ...	...	..
27	Netta rufina .	Red-crested pochard ..	...	...
28	Nyroca ferina ...	Pochard ...	...	...
29	Nyroca nyroca ...	Western white-eyed pochard.	...	...
30	Filigula filigula ...	Tufted scaup duck ...	...	...
31	Scolopax rusticola ...	Wood cock ...	Sum kukri ...	1st March—15th September.
32	Gallinago solitaria ...	Solitary snipe ...	Cháha ...	...
33	Gallinago nemoricola	Wood snipe ...	Sam kukri ...	...
34	Gallinago gallinago...	Common snipe ...	Cháha ...	...
35	Limnocryptes gallinula.	Jack-snipe ...	Do. ...	...
36	Rostratula capensis ...	Painted snipe ...	Do. ...	1st April—15th September.

(ii) Birds of Prey (not protected) : list supplied by Mr. C. H. Donald, F. Z. S.

No.	English name.	Scientific name.	Remarks.
		Family Vulturidæ.	
1	Cinereous Vulture ...	Vultur Monachus... ...	Probably breeds in Kulu; not very common.
2	Black Vulture	Otogyps calvus	Chiefly found among the lower hills; nowhere very common.
3	Griffon Vulture	Gyps fulvus	Seen near Larji.
4	Himalayan Griffon ...	" Himalayensis ...	Common; breeds in Kulu.
5	Himalayan Long-billed Vulture	" tenuirostris ...	Lower hills, seen near Zakát-khána.
6	The Egyptian Vulture ...	Neophron percnopterus ...	Common and resident.
		Family Pandionidæ.	
7	The Osprey	Pandion haliætus... ...	Not common; probably a migrant; may breed.
		Sub-Family Gypætinæ.	
8	The Lammergeyer ...	Gypætus barbatus ...	Very common; resident.
		Sub-Family Falconinæ.	
9	The Golden Eagle ...	Aquila chrysætus... ...	Resident; lives on crows, foxes, pine martens. Takes monal and snow cock occasionally, but crows are his chief food. Therefore a valuable game preserver.
10	The Imperial Eagle ...	" heliaca	Winter migrant. Lives on rats, lizards, carrion.
11	The Steppe Eagle ...	" bifasciata ...	Similar to No. 10.
12	The Tawny Eagle ...	" vindhiana... ...	Not common. Seen in lower valleys. May breed there. Food as for No. 10.
13	The Large Spotted Eagle ...	" maculata	Seen near Katrain. Food, chiefly frogs and lizards.
14	Bonelli's Eagle	Hieraetus fasciatus ...	Probably breeds on lower slopes. Destructive to game, chiefly chikor.
15	Booted Eagle	" pennatus ...	Fairly common; probably breeds in valley. Lives on rats, etc.; sometimes takes chikor. Not very destructive to game.
16	The Black Eagle... ...	Ictinaetus malayensis ...	Very rare if known at all in the valley. Mr. Howell's inclusion of this species doubtful.

(*ii*) *Birds of Prey* (*not protected*)—continued.

No.	English name.	Scientific name.	Remarks.
17	Hodgson's Hawk-Eagle ...	Spizætus nepalensis ...	Resident and probably breeds near Nagar. Very destructive to game.
18	The Short-toed Eagle ...	Circætus gallicus	Seen in Saráj near Sutlej River. Food, rats, lizards, snakes, &c.
19	Crested Serpent Eagle ...	Spilornis cheela	Not actually seen, but pretty certain to occur near the Dulchi Pass. Food, snakes, rats, etc.
20	The White-eyed Buzzard Eagle	Butastur teesa	Seen near Bajaura. Probably a wanderer, but may be resident. Food, rats, mice, worms, lizards.
21	White-tailed Sea Eagle ...	Haliætus albicilla ...	A migrant.
22	Hodgson's Fishing Eagle ...	Polioætus humilis ...	Resident and probably breeds. Destructive to fish.
23	Brahminy Kite	Haliastur indus	Not uncommon in the lower valleys near rice fields.
24	Common Pariah Kite ...	Milvus govinda	Fairly common and probably breeds.
25	The Black-winged Kite ...	Elanus cœruleus ...	A migrant. Lives on insects.
26	Hen-harrier	Cirus cyaneus	A migrant; fairly common in autumn and spring.
27	Marsh-harrier	Circus æruginosus ...	Similar to No. 26. Both fee d on mice, lizards and occasionally small birds.
N.B.	—It is possible that the Pale har	rier (C. macrurus) also occurs in	the valley during the autumn.
28	Long-legged Buzzard ...	Buteo ferox	A migrant, but common in the winter.
29	The Common Buzzard ...	Buteo desertorum ...	Resident. Probably breeds. Food of both varieties rats, voles, frogs, lizards, etc.
30	The Himalayan Rough-legged Buzzard.	Archibuteo hemiptilopus ...	A very rare bird. Blanford records a specimen from Kulu.
		True Hawks.	
31	The Goshawk	Astur palumbarius ...	The Baz (*m*). Zoora (*f*), of the Indian. Resident and breeds in the valley. Very destructive to game.

(*ii*) *Birds of Prey* (*not protected*)—concld.

No.	English name.	Scientific name.	Remarks.
32	The Shikra	Astur Badius	Common; resident and breeds.
33	The Sparrow Hawk ...	Accipiter nisus	The basha (*m*), bashin (*f*); same as for above.
34	The Besra Sparrow Hawk ..	Accipiter virgatus ...	Probably resident and breeds. Nowhere common.
		Falcons.	
35	The Peregrine Falcon ...	Falco peregrinus ...	A winter migrant.
36	The Shahin Falcon ...	Falco peregrinator ...	Resident and probably breeds. Destructive to small game such as partridges, chikor, etc.
37	The Indian Hobby ...	Falco severus	Resident and probably breeds. Lives on insects chiefly.
38	The Kestrel	Tinnunculus alaudarius ...	Resident and breeds. Lives on insects, mice, etc.

Appendix III.

(*a*) *Surveys and Maps.*

The Sub-Division was last surveyed during 1899—1901. The scale adopted varied for different areas, some parts of the survey being on the scale of 4" to one mile, others on that of 2", and others again on that of 1". The scale of the published maps also varied for different areas, portions of the sub-division being mapped on more than one scale. The lists below give the maps published on the above scale and the offices from which they can be obtained, and, in addition particulars of the smaller scale sheets which will now be described. The position of the areas covered by the sheets is shown on the accompanying index map.

Maps on the scale of one inch to four miles, termed Degree Sheets, have lately been issued. These are based on the original Atlas Sheets of the same scale, and have been corrected up to 1915 and 1916. The Degree Sheets are not shown on the index map, but each sheet covers a whole degree of latitude and longitude, the lines of which are given on the index map.

Survey Maps—continued.

The Degree Sheets are arranged as follows :—

	76° E – 77° E	77° E – 78° E	78° E – 79° E
33° N – 32° N	52 D	52 H	52 L
32° N – 31° N	53 A	53 E	53 I

The sheets 52 H and L have not yet been issued (September 1917) but will shortly appear. It should be noted that the graticules of these sheets have been drawn to accord with the latest value of the geodetic longitude of Madras Observatory, so that their longitude graticules are placed 2′ 27″ east of the corresponding graticules on the larger scale maps. The India and Adjacent Countries Sheets Nos. 52 and 53 on the scale of one inch to 16 miles take in the area of the sub-division. They each cover 16 degrees of longitude and latitude, four each way, and are coloured and shaded, with contours.

The detail on the 2″ and 4″ maps is the same, and includes 50 feet contours, boundaries of forests and of cultivation, temples, hamlets and villages, and gives, in fact, all detail that is usually required for close study of the ground. The one-inch maps are not contoured, but are shaded for mountains. Rules for obtaining maps are appended for convenience of the purchasing public, and of Government Departments. The prices are those ruling in 1917.

From the Officer in charge, Map Record and Issue Office, Survey of India, Calcutta, may be obtained :—

(1) India and Adjacent Countries Series, Nos. 52, 53.

Price, Re. one each. Survey, "modern." Scale 1″=16 miles.

(2) Degree Sheets Nos. 52, D, H, L; 53 A, E, I.

Price Re. 1 uncoloured, Re. 1-2-0 coloured. Survey, "old." Scale 1″=4 miles.

(3) Punjab Survey Sheets, Nos. 285 SE; 306 NW; 307 NW, SW; 308 NW, NE, SW, SE; 309 NE; 310 NE, SE; 332 NW, SW. Price, Re. 1-8-0 uncoloured, Re. 1-12-0 coloured. Scale 2″ = 1 mile. Survey "old."

(4) Punjab Survey Sheets, Nos. 329, 330, 331, 310 E.
Price, Re. 1-8-0 uncoloured, Re. 1-12-0 coloured. Survey "old." Scale 1″ = 1 mile.

Survey Maps.

From the Superintendent of the Trigonometrical Survey, Forest Map Office, Dehra Dun, United Provinces, can be obtained :—

Punjab Survey Sheets on scale of 4 inches to one mile, Nos.—

306 NW 3, 4 ; SW 1 to 4 ; NE 3 ; SE 1, 3, 4.

307 NW 1 to 4 ; SW 1 to 4 ; NE 1 to 4 ; SE 1 to 4.

308 NW 1 to 4 ; SW 1, 2, 4 ; NE 1 to 4 ; SE, 1 to 4.

309 ———————— NE 1 to 4 ; SE, 1 to 4.

310 ———————— NE 1, 2, 4 ; SE 2.

330 ———— SW 3 ————————

331 NW 1 to 4 ; SW, 1to 4 ; ————————

332 NW 1 to 4 ; SW 1 ; ————————

Rules for purchasing maps.

1. Requirements should be clearly stated and name and address legibly written.

2. Maps on the *Government Service* are supplied on *book-transfer* and to the *Public* by *V. P. P.* except when required mounted, when *prepayment* is necessary, as maps once mounted cannot be received back. Remittances should be made either by Postal Money Orders or by Cheques (uncrossed) on Banks in Calcutta. Receipts for payments into Treasuries are not accepted.

3. Maps are also supplied, (*i*) mounted on cloth only, or (*ii*) on cloth and folded, with or without dissecting, in book form in limp or stiff covers to any required size, or (*iii*) mounted on cloth with rollers and varnished. The charges are extra and mounting work is only undertaken at the special request of customers. *Packing and postage charges are extra.*

4. The maps available for issue are divided into two classes, *viz.*, (*i*) those surveyed prior to 1905 called "*old*", and (*ii*) those surveyed after 1905 called "*Modern.*"

5. *Maps* on the scales of 1" = 1 mile, 1" = 2 miles and 1" = 4 miles *from "old" surveys are usually printed in black only or in black with hills in brown.*

6. *Those from "Modern" surveys are printed in 4 or 5 colours, i.e.,* water forms in blue, towns and roads in red, forests and jungle in green, cultivation in yellow, hill contours in brown with shading to emphasize the hills, and other details in black.

7. When specially asked for, the maps on these three scales have colour ribands along boundaries added by hand at an extra cost of 2 to 4 annas per sheet.

8. Maps on the scale of 1" = 4 miles from modern surveys called "Degree" sheets, have also an edition printed in colours and graduated layer tints to show altitudes. This edition is called the *Layered edition,* and *colour ribands along boundaries cannot be added.*

Survey Maps.

9. The maps on the smaller scales, *viz.*, $\frac{1}{1,000,000}$ or nearly 1" = 16 miles and $\frac{1}{2,000,000}$ or nearly 1" = 32 miles from Modern Surveys are printed in 4 or 5 colours in either one or two of the following editions, except those marked "Provisional issue" which are from old surveys :—

(1) *Layered edition*, printed in colours with contours and graduated layer tints to show altitudes and shading to emphasize the hills. (*Colour ribands along boundaries cannot be added to this edition.*)

(2) *Political edition*, printed in colours with colour ribands along boundaries, contours to show altitudes and shading to emphasize the hills.

(3) *Provisional issue*, printed in black with hills in brown. Colour ribands along boundaries are added by hand when required at an extra cost of 2 annas per sheet.

(*b*) *Heights of principal Peaks in Kulu sub division.*

Degree sheet.	Serial No. of peak.	Lat.	Long.	Height.	Remarks.
52 D	23	32° 31'	76° 52'	19,830	Ghasa Black cone.
52 H	4	32° 29'	77° 14'	19,200	Gephan or Gyéphang.
	5	26'	3'	20,340	Probably "Snowy Peak M."
	6	21'	3'	19,450	Probably "Charmoz."
	8	49'	24'	20,050	Probably "Todd's Giant."
	13	38'	24'	20,530	...
	15	33'	25'	21,380	...
	16	27'	29'	20,480	...
	17	22'	30'	19,830	...
	20	18'	24'	20,410	Deotibba.
	23	46'	31'	19,490	...
	28	35'	36'	20,050	...
	29	22'	34'	19,940	...
	31	21'	43'	20,570	...
	33	21'	33'	20,550	...
	35	5'	44'	21,760	...

(*b*) ***Heights of principal Peaks in Kulu sub-division*** – continued.

Degree sheet.	Serial No. of peak.	Lat.	Long.	Height.	REMARKS.
52 H	37	32° 47′	77° 52′	19,590	...
	38	46′	53′	19,960	
	41	37′	58′	20,200	...
	42	36′	59′	20,130	...
	43	35′	49′	19,740	...
	44	33′	55′	20,180	...
	45	33′	46′	19,970	...
	46	32′	55′	19,870	...
	47	29′	49′	19,720	
	49	7′	55′	19,720	...
	50	2′	47′	21,350	...
	Tsárab No. 1 Hill Staff.	52′	47′	19,008	...
52 L	5	32° 39′	78° 3′	20,770	...
	7	31′	14′	20,880	...
	8	29′	7′	20,690	...
	9	19′	10′	20,680	...
	14	34′	19′	21,[illegible]80	...
	15	34′	19′	21,790	...
	18	30′	21	21,160	...
	20	23′	25′	20,440	...
	21	21′	29′	21,410	...
	22	20′	29′	21,410	...
	Parilungbi Hill Staff.	28′	10′	20,296	...
	Shilla Hill Staff.	24′	12′	23,050	Highest point in the sub-division.
	Kamkma Hill Staff.	22′	5′	19,566	...
	Kamelang Hill Staff.	6′	18′	19,362	...

(*b*) *Heights of principal Peaks in Kulu sub-division*—concluded.

Degree Sheet.	Serial No. of peak.	Lat.	Long.	Height.	Remarks.
53 E	1	31° 51′	77° 43′	20,500	...
53 I	1	31° 59′	78° 7′	19,440	...
	2	59′	11′	19,650	...
	18	57′	22′	21,680	...
Passes	Kúnzom ...	32° 23′	77° 41′	14,930	...
	Shíngkún ...	53′	11′	16,722	...
	Párang ...	26′	78° 6′	18,300	...
	Kukti ...	32′	76° 52′	17,000	...
	Bhábeh ...	31° 48′	78° 4′	15,000	...

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